Yahoo Group Archive: meterbuilder

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Date span: 2011-11-21 through 2017-11-09

Source WARC: meterbuilder.my4sOqw.warc.gz

Source item: https://archive.org/details/yahoo-groups-2018-09-22T06-18-52Z-5823d7

Messages included in this PDF: 146

Yahoo replaced the domain portions of email addresses with @... in the archived messages. Characters lost in Yahoo's archived text appear as ?.

Messages are presented in ascending Yahoo message-ID order. Gaps indicate records absent from the source WARC or messages omitted from this PDF as spam.

1. Introduction

Yahoo group: meterbuilder
Date: 2011-11-21 16:06:40 UTC
From: Chuck
Topic: 1 Message: 1

Welcome to the MeterBuilder Yahoo! discussion group.

I ordered the MB-1 at the Dayton Hamvention in May and waited patiently for it to be ready for delivery. Of all the things I saw at the Hamvention, that was what I decided for a significant purchase to keep from bringing back more cash than I had when arrived.

A couple weeks ago I received notice from MeterBuilder than the MB-1 was ready to ship and received one shortly thereafter. Of the many kits of various sorts I've built over the past 40 some years of being a Ham, this was certainly one of the most satisfying.

I completed the MB-1 in three reasonably long evenings. I thought the instructions were thorough and appreciated them not giving me a part-by-part process to follow. By following markings on the board, and a few notes in the assembly manual, it was pretty obvious where everything was to be installed and how. They did an excellent job of marking components and separating them into bags that were organized logically. Nothing was missing and it was clear they had put considerable effort to getting this kit right on the first release.

The best part was that the MB-1 came up operating without a single glitch or error. There is a bit of a user learning curve, but I'm working though that and am quickly becoming comfortable with operation. As of this weekend, it's up and running in my shack and the first coupler (the one delivered with the MB-1) is installed, adjusted, and functioning well with my main HF rig.

Thank you MeterBuilder for a fine product.

I'll try to post some construction pictures in the Photos section of this group sometime soon.

Chuck - N8DNX

2. Welcome from MeterBuilder

Yahoo group: meterbuilder
Date: 2011-12-02 20:01:32 UTC
From: meterbuilder@att.net
Topic: 2 Message: 2

Welcome to the new members.

First, I would like to thank Chuck for setting up the group. It was on the list of things to do, but I wouldn't have gotten to it for a while. I'm sure the early availability of the group will be very helpful.

Thanks again to everyone for your interest in MeterBuilder and for being brave souls to support a new product.

73,
Lou K2FP

3. Front Panel Pot

Yahoo group: meterbuilder
Date: 2011-12-02 20:04:22 UTC
From: meterbuilder@att.net
Topic: 3 Message: 3

One of the members had a problem with the front panel pot being intermittent. It shows up in the "Front Panel High Precision Pot" self test. Instead of the numeric values changing smoothly from 1 - 99 as the pot is turned clockwise, the value jumps erratically as the pot is turned. This also showed up as a problem when using the pot to change a setting, such as the peak hold value, which makes use of the front panel pot.

If you encounter this problem, please let me know and I'll send you a new part. Going forward, we'll check all the pots before boxing up any new kits.

If you have received your kit already but haven't assembled it yet, you may want to test the pot first for intermittent operation with an ohmmeter before installing it. (It's the jumbo size pot.) If it has a problem, you'll save yourself a bit of work.

73,
Lou K2FP

4. How is everyone using the MB-1?

Yahoo group: meterbuilder
Date: 2011-12-03 15:01:52 UTC
From: fserota@msn.com
Topic: 4 Message: 4

I would be very interested in hearing how people are using the meter, other than power and SWR measurements.

Fred, K3BHX

5. Re: [meterbuilder] How is everyone using the MB-1?

Yahoo group: meterbuilder
Date: 2011-12-04 13:46:31 UTC
From: Charles Scott
Topic: 4 Message: 5

Fred:

It's pretty early, so I can't say I've done anything other than power and SWR readings with my MB-1.

I did manage to get through a complete coupler calibration for a Telewave PM-2A power monitor I had from an older paging transmitter. Both forward and reflected power came up pretty much right on, at least as close as I could keep the amplifier on an exact power level. At first I was a bit confused with the way the manual does the complete description of the process and then does the steps for doing the calibration, but once you get going it all makes sense and is pretty quick.

The next thing I want to do is to cable up and calibrate two power sensors I have from my aging Kenwood SW-2000 power meter. I was at first a bit hesitant to dedicate those to the MB-1 and abandon the Meter itself, but I then realized that I can feed back out of the MB-1 to a sensor input on the SW-2000 and use it for another display. Hey, why not!

One other thing I'm planning to do is to put a temperature sensor on the exhaust air from my Ameritron AL-1200 amplifier. Not that I'm at all concerned about the amp, but because I can. Having that would be one good reason for being able to read multiple sensor inputs at the same time, which I suspect is a capability I'd like to see MeterBuilder add sometime in the future.

I suppose I could monitor my bench 12 V and 24 V supplies for both voltage and current or AC power and current on both 110 V and 220 V lines. There's lots of examples in the manual. I think the limitation here is more the number of inputs than anything else. I wonder if there's a way to use different setups (you can save 6 complete configuration sets) and pickup output lines to drive outboard input selection for additional sets of inputs. That would make it possible to select additional sources. Could do it anyway by building up an input switch-box and switching that and selecting the matching configuration on the MB-1.

Hope that's just some thoughts I've had about it. I guess we'll soon see what people do with it.

BTW, I just updated my construction images in the Photos section.

Chuck - N8DNX

On 12/3/2011 10:01 AM, fserota@... wrote: I would be very interested in hearing how people are using the meter, other than power and SWR measurements.

Fred, K3BHX

6. Re: How is everyone using the MB-1?

Yahoo group: meterbuilder
Date: 2011-12-04 18:03:34 UTC
From: meterbuilder@att.net
Topic: 4 Message: 6

Chuck

I haven't thought about the idea of bank switching before, but I think your suggestion about using a configuration set will work with some limitations.

The alarm relay could be used to switch between two banks of sensors using the configuration set settings below.

Configuration Set 1:
Alarm off
other alarm conditions are don't cares

Configuration Set 2:
Alarm ON (This is set from the alarm menu on line 4 of the LCD)

The rest of these settings are done from the alarm setup screen (brought up by a long press of the Set-Up button when the Alarm Menu is shown on line 4).

Alarm TRIP device - Relay
Auto Trip Reset Mode - Manual
Trip Interval: 50 ms (shortest duration for hi/low power trips)
Minimum Power Trip Point 27,500
The other alarm settings are don't cares.

As long as the value you are measuring is less than 27,500, the alarm relay will always be active when configuration set 2 is chosen and will always be off when configuration set 1 is chosen.

The limitation is that even though the relay has two sets of contacts, they are ganged together so that the PTT function goes along for the ride.

Lou K2FP

--- In meterbuilder@yahoogroups.com, Charles Scott <cscott@...> wrote:
>
>
> Fred:
>
> It's pretty early, so I can't say I've done anything other than power
> and SWR readings with my MB-1.
>
> I did manage to get through a complete coupler calibration for a
> Telewave PM-2A power monitor I had from an older paging transmitter.
> Both forward and reflected power came up pretty much right on, at least
> as close as I could keep the amplifier on an exact power level. At first
> I was a bit confused with the way the manual does the complete
> description of the process and then does the steps for doing the

> calibration, but once you get going it all makes sense and is pretty quick.
>
> The next thing I want to do is to cable up and calibrate two power
> sensors I have from my aging Kenwood SW-2000 power meter. I was at first
> a bit hesitant to dedicate those to the MB-1 and abandon the Meter
> itself, but I then realized that I can feed back out of the MB-1 to a
> sensor input on the SW-2000 and use it for another display. Hey, why not!
>
> One other thing I'm planning to do is to put a temperature sensor on the
> exhaust air from my Ameritron AL-1200 amplifier. Not that I'm at all
> concerned about the amp, but because I can. Having that would be one
> good reason for being able to read multiple sensor inputs at the same
> time, which I suspect is a capability I'd like to see MeterBuilder add
> sometime in the future.
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> I suppose I could monitor my bench 12 V and 24 V supplies for both
> voltage and current or AC power and current on both 110 V and 220 V
> lines. There's lots of examples in the manual. I think the limitation
> here is more the number of inputs than anything else. I wonder if
> there's a way to use different setups (you can save 6 complete
> configuration sets) and pickup output lines to drive outboard input
> selection for additional sets of inputs. That would make it possible to
> select additional sources. Could do it anyway by building up an input
> switch-box and switching that and selecting the matching configuration
> on the MB-1.
>
> Hope that's just some thoughts I've had about it. I guess we'll soon see
> what people do with it.
>
> BTW, I just updated my construction images in the Photos section.
>
> Chuck - N8DNX
>
>
>
>
> On 12/3/2011 10:01 AM, fserota@... wrote: I would be very interested
> in hearing how people are using the meter, other than power and SWR
> measurements.
>
> Fred, K3BHX
>

7. Re: [meterbuilder] Re: How is everyone using the MB-1?

Yahoo group: meterbuilder
Date: 2011-12-04 21:14:22 UTC
From: Charles Scott
Topic: 4 Message: 7

Lou:

I actually thought about the alarm circuit and took a look at it. Too bad it's only one output. I assume if I do it that way though that I would no longer have SWR alarm with those configurations that used the relay to control outboard switching. I guess another thing to put on the list -- an I/O extension unit for input switching and some firmware enhancements to go with it.

Oh, did I mention the user macro language request yet? :)

Chuck - N8DNX

On 12/4/2011 1:03 PM, meterbuilder@... wrote:
> Chuck
>
> I haven't thought about the idea of bank switching before, but I think your suggestion about using a configuration set will work with some limitations.
>
> The alarm relay could be used to switch between two banks of sensors using the configuration set settings below.
>
> ...
>
> Lou K2FP
>
>

8. Re: How is everyone using the MB-1?

Yahoo group: meterbuilder
Date: 2011-12-05 15:35:42 UTC
From: meterbuilder@att.net
Topic: 4 Message: 8

Chuck

that's correct. The SWR alarm relay would assume the state controlled for the outboard switching.

One could be done with the existing hardware is to control one of the unused I/O pins on the PIC board. The I/O pins provide a standard 5v logic output that could be used to drive a simple transistor circuit for outboard switching. This would be a firmware-only change.

I don't know about the macro request though. Wouldn't want it to appear that we went overboard on anything!

Lou K2FP

--- In meterbuilder@yahoogroups.com, Charles Scott <cscott@...> wrote:
>
> Lou:
>
> I actually thought about the alarm circuit and took a look at it. Too
> bad it's only one output. I assume if I do it that way though that I
> would no longer have SWR alarm with those configurations that used the
> relay to control outboard switching. I guess another thing to put on the
> list -- an I/O extension unit for input switching and some firmware
> enhancements to go with it.
>
> Oh, did I mention the user macro language request yet? :)
>
> Chuck - N8DNX
>
>
> On 12/4/2011 1:03 PM, meterbuilder@... wrote:
> > Chuck
> >
> > I haven't thought about the idea of bank switching before, but I think your suggestion about using a configuration set will work with some limitations.
> >
> > The alarm relay could be used to switch between two banks of sensors using the configuration set settings below.
> >
> > ...
> >
> > Lou K2FP
> >
> >
>

9. Re: [meterbuilder] Re: How is everyone using the MB-1?

Yahoo group: meterbuilder
Date: 2011-12-05 17:29:07 UTC
From: Charles Scott
Topic: 4 Message: 9

Lou:

Looks to me, if I read the drawings right, that you have 7 unused I/O pins on U8. If three of those were setup to output a binary number that represented the last selected setup, they could drive an outboard switching unit to do whatever input selection that would be desired to match the selected setup. Unless there three unused outputs available on the PIC board.

OK, I'll wait a year before I bring up macros again.

Chuck - N8DNX

On 12/5/2011 10:35 AM, meterbuilder@... wrote:
> Chuck
>
> that's correct. The SWR alarm relay would assume the state controlled for the outboard switching.
>
> One could be done with the existing hardware is to control one of the unused I/O pins on the PIC board. The I/O pins provide a standard 5v logic output that could be used to drive a simple transistor circuit for outboard switching. This would be a firmware-only change.
>
>
> I don't know about the macro request though. Wouldn't want it to appear that we went overboard on anything!
>
> Lou K2FP

10. Re: [meterbuilder] Re: How is everyone using the MB-1?

Yahoo group: meterbuilder
Date: 2011-12-05 17:36:46 UTC
From: Charles Scott
Topic: 4 Message: 10

Lou:

I'm going to reply to myself. Thinking about this, if the firmware were updated to include one more parameter that can be set using the front panel that would be an input selector code for expanded input, then it could be more user controlled rather than being locked to the last setup selected. I guess that makes more sense. At that point the user could manipulate that as desired and it could be used for things other than input selection.

Chuck - N8DNX

On 12/5/2011 12:29 PM, Charles Scott wrote:
> Lou:
>
> Looks to me, if I read the drawings right, that you have 7 unused I/O
> pins on U8. If three of those were setup to output a binary number that
> represented the last selected setup, they could drive an outboard
> switching unit to do whatever input selection that would be desired to
> match the selected setup. Unless there three unused outputs available on
> the PIC board.
>
> OK, I'll wait a year before I bring up macros again.
>
> Chuck - N8DNX
>

11. Re: How is everyone using the MB-1?

Yahoo group: meterbuilder
Date: 2011-12-06 02:25:26 UTC
From: meterbuilder@att.net
Topic: 4 Message: 11

Chuck

I think you suggestion makes more sense. I could see a case where several identical sensors are performing measurements, and the user may simply want to select senor 1, sensor 2, ... while keeping all of the other parameters unchanged. In that case, the "bank select" could work just like the coupler selection - where you bring up the coupler menu and then sequence through the different couplers by pressing a menu button.

Lou - K2FP

--- In meterbuilder@yahoogroups.com, Charles Scott <cscott@...> wrote:
>
> Lou:
>
> I'm going to reply to myself. Thinking about this, if the firmware were
> updated to include one more parameter that can be set using the front
> panel that would be an input selector code for expanded input, then it
> could be more user controlled rather than being locked to the last setup
> selected. I guess that makes more sense. At that point the user could
> manipulate that as desired and it could be used for things other than
> input selection.
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> Chuck - N8DNX
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> > switching unit to do whatever input selection that would be desired to
> > match the selected setup. Unless there three unused outputs available on
> > the PIC board.
> >
> > OK, I'll wait a year before I bring up macros again.
> >
> > Chuck - N8DNX
> >
>

12. MB-1 Calibration

Yahoo group: meterbuilder
Date: 2011-12-23 13:59:10 UTC
From: phil_ad5x
Topic: 12 Message: 12

I looked at the cal data on the MB-HF1 coupler and it appeared pretty flat on HF vs 6 meters. So I decided to use a reference calibration band of 20 meters and compare this to the pre-loaded 80M, 10M and 6M preloaded data. The "Act." (actual) data is taken with a Minicircuits PWR-6GHS+ and home cal'd attenuators. The MiniCircuits PWR-6GHS+ is a NIST-traceable cal'd power sensor (see the PWR-6GHS+ review on my website at www.ad5x.com). I cal'd the attenuators with the Minicircuits PWR-6GHS+ and a HAMMEG tracking generator at various points from 2MHz to 1GHz. I also compared the cal points at 50MHz using a HP 436B/8482A with the HP437B 50 MHz reference output and got the same results on the attenuators at that frequency. The data is shown below:

Coupler 80M Ref 10M data 6M data
Band MB1/Act. MB1/Act. MB1/Act.
160M 103/101 105/101 110/100.7
20M 98.2/99.0 100.6/99.2 105.3/99.1
10M 92.0/92.5 94.0/92.8 98.2/92.3
6M 93.8/93.7 95.5/93.7 100.2/93.5

This data is quite interesting. As you can see, the power readings are VERY accurate across the full range when using the 80 meter reference data (worst case discrepancy is just 2% on 160 meters) after adjusting the pots while driving the coupler with a 14 MHz signal. So I have no need to change reference band data across the full 160-6 meter frequency range. I have looked at a second MB-HF1 and found it to be similarly flat.

So based on this sample of two, I'd recommend doing your cal on 20 meters and use the 80M reference band info only for all bands. If you don't have a precision wattmeter, simply use the voltmeter set-up process as outlined in the Quick Start guide (with a 20 meter signal). For those who have a precision power meter, it would be interesting to repeat my tests so we can get more data on more couplers.

Phil ☐ AD5X

13. New file uploaded to meterbuilder

Yahoo group: meterbuilder
Date: 2011-12-23 14:03:39 UTC
From: meterbuilder@yahoogroups.com
Topic: 13 Message: 13

Hello,

This email message is a notification to let you know that
a file has been uploaded to the Files area of the meterbuilder
group.

File : /MB-HF1 Improvement.doc
Uploaded by : phil_ad5x <ad5x@...>
Description : MB-HF1 Coupler Improvment

You can access this file at the URL:
http://groups.yahoo.com/group/meterbuilder/files/MB-HF1%20Improvement.doc

To learn more about file sharing for your group, please visit:
http://help.yahoo.com/l/us/yahoo/groups/original/members/web/index.html
Regards,

phil_ad5x <ad5x@...>

14. MB-HF1 Broadband SWR improvement

Yahoo group: meterbuilder
Date: 2011-12-23 14:07:11 UTC
From: phil_ad5x
Topic: 14 Message: 14

I just uploaded a file to the "files" section that details a simple mod the improves in-line SWR performance of the coupler all the way up to 2-meters.

Phil - AD5X

15. Bar graph photo

Yahoo group: meterbuilder
Date: 2011-12-23 13:28:56 UTC
From: hamradioo
Topic: 15 Message: 15

I like the bar graph photo. I plan on mounting the bar graph in a box also - nice job. Also like the multi-color LED choice. It's fun to see the variations of completed meters. John - AB2JA

16. Re: MB-HF1 Broadband SWR improvement

Yahoo group: meterbuilder
Date: 2011-12-23 16:41:04 UTC
From: meterbuilder@att.net
Topic: 14 Message: 16

Phil,
thanks very much for the comprehensive analysis!

So far, the MB-1 couplers that I have tested have been very similar. I'll add the modification and see if that's the case on 2 meters as well. If so, Ill add the band correction table for 2 meters, and make the update MB-HF1 coupler table available for download on the web site (along with the caveat that the coupler is suitable for FWD power measurements only on 2 meters). I'll also look into the possibility of benchmarking each coupler on 2 meters as well.

Lou - K2FP

--- In meterbuilder@yahoogroups.com, "phil_ad5x" <ad5x@...> wrote:
>
> I just uploaded a file to the "files" section that details a simple mod the improves in-line SWR performance of the coupler all the way up to 2-meters.
>
> Phil - AD5X
>

17. Simple mounting arrangement for external displays

Yahoo group: meterbuilder
Date: 2012-01-03 22:03:15 UTC
From: meterbuilder@att.net
Topic: 17 Message: 17

Happy New Year to all.

If you are planning to make use of the Hi-Visibility external displays but have not yet found a suitable enclosure, take a look at the following link:

http://meterbuilder.com/mb1/expansion.html#Simple_Mounting_Arrangement_for_External_Displays

An inexpensive acrylic picture frame makes a decent "case". Took about one hour.

Lou - K2FP

18. Support for Bird line sections

Yahoo group: meterbuilder
Date: 2012-01-13 18:10:11 UTC
From: meterbuilder@att.net
Topic: 18 Message: 18

Hi

Any Bird wattmeter fans? We've added some information on interfacing your MB-1 to Bird line sections:

http://meterbuilder.com/mb1/bird-line-sections.html

73,
Lou - K2FP

19. MB-1 Review

Yahoo group: meterbuilder
Date: 2012-01-28 14:40:58 UTC
From: phil_ad5x
Topic: 19 Message: 19

I've put a review of the MB-1 in the "Product Reviews" section of my website at www.ad5x.com.

Phil - AD5X

20. Re: MB-1 Review

Yahoo group: meterbuilder
Date: 2012-01-28 21:50:02 UTC
From: eschuller@sbcglobal.net
Topic: 19 Message: 20

Nice review, Phil. I found that monitoring avg. power was not overly useful. I did find that watching maxref was an interesting function, however. I'm sure that everyone has their own favorites!

73,
Ed - K6CTA

>
> I've put a review of the MB-1 in the "Product Reviews" section of my website at www.ad5x.com.
>
> Phil - AD5X
>

21. Re: MB-1 Review

Yahoo group: meterbuilder
Date: 2012-01-29 14:27:26 UTC
From: meterbuilder@att.net
Topic: 19 Message: 21

Thanks Phil.

Great overview.
Up to this point, there has been no user feedback on MB-1's accuracy. I'm sure the information in your review will be helpful to others.

Lou - K2FP

--- In meterbuilder@yahoogroups.com, "phil_ad5x" <ad5x@...> wrote:
>
> I've put a review of the MB-1 in the "Product Reviews" section of my website at www.ad5x.com.
>
> Phil - AD5X
>

22. Re: MB-1 Review

Yahoo group: meterbuilder
Date: 2012-01-29 23:30:27 UTC
From: hamradioo
Topic: 19 Message: 22

Hi Phil,
Yes, - very nice review and good photos. I'm set for forward power (tune), reflected power, delivered power (I like to see the math work) and SWR. Good idea using the labels also. Nice to see the accuracy verified with NIST tracability. Good stuff! You have an interesting website - lots of good reviews to read - Thanks for your hard work!
John
AB2JA

--- In meterbuilder@yahoogroups.com, "phil_ad5x" <ad5x@...> wrote:
>
> I've put a review of the MB-1 in the "Product Reviews" section of my website at www.ad5x.com.
>
> Phil - AD5X
>

23. Custom Meter Scale

Yahoo group: meterbuilder
Date: 2012-02-12 02:39:58 UTC
From: eschuller@sbcglobal.net
Topic: 23 Message: 23

I decided that I wanted a larger meter to use with the MB-1. I found a new 4" meter that had a 2 ma movement on eBay for a few dollars. The scale ran from 0 to 2, which made it easy to calibrate. I used the Meter Basic program that is linked from the Meterbuilder site, and created a new 0-2000 Watt scale. The program is easy to use, and the results are very nice. I put a picture of it in the photo area of this site. The ability to use external meters is a nice feature of the MB-1.

73,
Ed - K6CTA

24. Re: Custom Meter Scale

Yahoo group: meterbuilder
Date: 2012-02-13 21:00:08 UTC
From: hamradioo
Topic: 23 Message: 24

Nice job Ed. I may do the same if I spot a nice meter at the next hamfest I go to - or as you did - on eBay. Looks good.
John - AB2JA

--- In meterbuilder@yahoogroups.com, "eschuller@..." <eschuller@...> wrote:
>
> I decided that I wanted a larger meter to use with the MB-1. I found a new 4" meter that had a 2 ma movement on eBay for a few dollars. The scale ran from 0 to 2, which made it easy to calibrate. I used the Meter Basic program that is linked from the Meterbuilder site, and created a new 0-2000 Watt scale. The program is easy to use, and the results are very nice. I put a picture of it in the photo area of this site. The ability to use external meters is a nice feature of the MB-1.
>
> 73,
> Ed - K6CTA
>

25. New - YouTube Video

Yahoo group: meterbuilder
Date: 2012-03-29 13:28:34 UTC
From: hamradioo
Topic: 25 Message: 25

Hey Guys,

Just wanted to mention that there is a new YouTube video on the MB home page and YouTube. I watched it as a refresher - easier than reading the manual - at least for me it is quicker. Check it out. Pretty good quality and informative. I wondered what the number at the end of the LCD bar graph was doing appearing every so often - now I know. I'm still learning stuff about this meter - I'm not bored yet!

http://www.youtube.com/watchv=6UKXhtKUmx0&feature=context&context=C4212697ADvjVQa1PpcFN9zt51D_xeOqY1ubgeNXBI0Zwxkh_XyYs=

John
AB2JA

26. Re: [meterbuilder] New - YouTube Video

Yahoo group: meterbuilder
Date: 2012-03-29 13:50:47 UTC
From: Charles Scott
Topic: 25 Message: 26

John:

Would love to see this, but the link doesn't seem to work for me.

Chuck - N8DNX

On 3/29/2012 9:28 AM, hamradioo wrote:
>
> Hey Guys,
>
> Just wanted to mention that there is a new YouTube video on the MB
> home page and YouTube. I watched it as a refresher - easier than
> reading the manual - at least for me it is quicker. Check it out.
> Pretty good quality and informative. I wondered what the number at the
> end of the LCD bar graph was doing appearing every so often - now I
> know. I'm still learning stuff about this meter - I'm not bored yet!
>
> http://www.youtube.com/watchv=6UKXhtKUmx0&feature=context&context=C4212697ADvjVQa1PpcFN9zt51D_xeOqY1ubgeNXBI0Zwxkh_XyYs=
> <http://www.youtube.com/watchv=6UKXhtKUmx0&feature=context&context=C4212697ADvjVQa1PpcFN9zt51D_xeOqY1ubgeNXBI0Zwxkh_XyYs=>
>
> John
> AB2JA
>

27. Re: New - YouTube Video

Yahoo group: meterbuilder
Date: 2012-03-30 00:04:42 UTC
From: hamradioo
Topic: 25 Message: 27

Hi Chuck,
Yes - I see that now. Just go to the meterbuilder site - two new demo videos - pretty informative. Meterbuilder.com You will find them right on the home page. Let me know what you think or if you have a problem finding it. I don't want to try another link here for fear it will not work again. The Meterbuilder site is easy to navagate.
John
AB2JA

--- In meterbuilder@yahoogroups.com, Charles Scott <cscott@...> wrote:
>
> John:
>
> Would love to see this, but the link doesn't seem to work for me.
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> Chuck - N8DNX
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> On 3/29/2012 9:28 AM, hamradioo wrote:
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> > Hey Guys,
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> > Just wanted to mention that there is a new YouTube video on the MB
> > home page and YouTube. I watched it as a refresher - easier than
> > reading the manual - at least for me it is quicker. Check it out.
> > Pretty good quality and informative. I wondered what the number at the
> > end of the LCD bar graph was doing appearing every so often - now I
> > know. I'm still learning stuff about this meter - I'm not bored yet!
> >
> > http://www.youtube.com/watchv=6UKXhtKUmx0&feature=context&context=C4212697ADvjVQa1PpcFN9zt51D_xeOqY1ubgeNXBI0Zwxkh_XyYs=
> > <http://www.youtube.com/watchv=6UKXhtKUmx0&feature=context&context=C4212697ADvjVQa1PpcFN9zt51D_xeOqY1ubgeNXBI0Zwxkh_XyYs=>
> >
> > John
> > AB2JA
> >
>

28. MB-1 YouTube Videos

Yahoo group: meterbuilder
Date: 2012-03-30 15:13:09 UTC
From: meterbuilder@att.net
Topic: 28 Message: 28

Sorry for the problem some of you had with the links.

The MB-1 homepage now has links to all five videos covering different subjects.

Don't worry Steven Spielberg. I'm keeping my daytime job for now.
Lou - K2FP

29. Video on Coupler Calibration

Yahoo group: meterbuilder
Date: 2012-04-03 15:59:11 UTC
From: meterbuilder@att.net
Topic: 29 Message: 29

For those of you who may be interested in calibrating your own couplers, we have posted a YouTube video that shows the complete procedure.

http://www.youtube.com/watch?feature=player_embedded&v=kLyj92IKmGg

73,
Lou - K2FP

30. No need for band correction when using MB-1 supplied coupler

Yahoo group: meterbuilder
Date: 2012-04-05 20:18:43 UTC
From: meterbuilder@att.net
Topic: 30 Message: 30

Based on tests performed by Phil, AD5X, and with the results duplicated on newly acquired NIST certified measurement gear, there is no need to use the "Band" menu when operating MB-1 on on the different HF bands including 6 meters. The MB-1 coupler is essentially flat across the entire HF band. Using the band correction factors programmed into the MB-1 calibration table for the 6 meter and 10 meter band actually reduces the accuracy somewhat compared to operating the meter with its basic calibration table.

The current MB-1 coupler table agrees closely with the measurements made with the NIST certified equipment. If we decide to do some minor tweaking on the coupler calibration table, we will make the new table available on the MeterBuilder website. It can be downloaded and installed using the EEPROM Backup/Restore utility. It works the same way as described for downloading the recently added calibration table for the Bird line sections described on:
http://meterbuilder.com/mb1/bird-line-sections.html

We will keep you updated here if we make any changes.

Regards,
Lou - K2FP

31. Re: New - YouTube Video

Yahoo group: meterbuilder
Date: 2012-03-29 16:31:23 UTC
From: baj4242
Topic: 25 Message: 31

Hi Chuck,

Try this link:

http://www.youtube.com/watch?v=6UKXhtKUmx0&feature=youtu.be

Barry - WB2ZXJ

--- In meterbuilder@yahoogroups.com, Charles Scott <cscott@...> wrote:
>
> John:
>
> Would love to see this, but the link doesn't seem to work for me.
>
> Chuck - N8DNX
>
> On 3/29/2012 9:28 AM, hamradioo wrote:
> >
> > Hey Guys,
> >
> > Just wanted to mention that there is a new YouTube video on the MB
> > home page and YouTube. I watched it as a refresher - easier than
> > reading the manual - at least for me it is quicker. Check it out.
> > Pretty good quality and informative. I wondered what the number at the
> > end of the LCD bar graph was doing appearing every so often - now I
> > know. I'm still learning stuff about this meter - I'm not bored yet!
> >
> > http://www.youtube.com/watchv=6UKXhtKUmx0&feature=context&context=C4212697ADvjVQa1PpcF
N9zt51D_xeOqY1ubgeNXBI0Zwxkh_XyYs=
> > <http://www.youtube.com/watchv=6UKXhtKUmx0&feature=context&context=C4212697ADvjVQa1Ppc
FN9zt51D_xeOqY1ubgeNXBI0Zwxkh_XyYs=>
> >
> > John
> > AB2JA
> >
>

32. Re: New - YouTube Video

Yahoo group: meterbuilder
Date: 2012-06-12 15:42:34 UTC
From: Chuck
Topic: 25 Message: 32

Barry:

Sorry, you posted this a while ago and somehow is slipped through the approval process. Future posts for you will not be moderated (all users are until I see at least one good post from them).

Chuck

--- In meterbuilder@yahoogroups.com, "baj4242" <bjablonski@...> wrote:
>
> Hi Chuck,
>
> Try this link:
>
> http://www.youtube.com/watch?v=6UKXhtKUmx0&feature=youtu.be
>
> Barry - WB2ZXJ
>

33. MB-1 Coupler question

Yahoo group: meterbuilder
Date: 2012-07-09 22:03:27 UTC
From: kc8fws
Topic: 33 Message: 33

Hi All,

I really like what i see about this meter but have a quick qestion. I see on the website WaveNode's hf couplers are mentioned. Will the MB-1 work with all their couplers. Im a VHF weak signal guy and run about a kilowatt on 2 meters and am curious if i can get the same typical MB1 accuracy using the Wavenode UHF-2K coupler.

Thanks,
Mike

34. Re: [meterbuilder] MB-1 Coupler question

Yahoo group: meterbuilder
Date: 2012-07-09 23:37:40 UTC
From: Charles Scott
Topic: 33 Message: 34

Mike:

Should be able to calibrate and use about anything that puts out a DC voltage relative to something. If there's not already a calibration in the MB-1 for the coupler you want to use, you can calibrate it as desired. How accurate it is depends on how much care you take when doing the calibration. You should also be able to calibrate couplers for use outside their normal power and frequency range. So, yes, you should be able to do it as long as the coupler you use can put out a varying DC voltage relative to power at whatever power and frequency you want to use.

Chuck - N8DNX

On 7/9/2012 6:03 PM, kc8fws wrote:
>
> Hi All,
>
> I really like what i see about this meter but have a quick qestion. I
> see on the website WaveNode's hf couplers are mentioned. Will the MB-1
> work with all their couplers. Im a VHF weak signal guy and run about a
> kilowatt on 2 meters and am curious if i can get the same typical MB1
> accuracy using the Wavenode UHF-2K coupler.
>
> Thanks,
> Mike
>

35. Re: MB-1 Coupler question

Yahoo group: meterbuilder
Date: 2012-07-10 00:42:59 UTC
From: meterbuilder@att.net
Topic: 33 Message: 35

Hi Mike

As Chuck pointed out, MB-1 can interface with most couplers that have a DC output. I haven't tried the WaveNode UHF coupler with MB-1, but if you want to run a few stand alone tests with the candidate coupler, the website has a procedure that can be used to determine if the coupler will work satisfactorily with MB-1:
http://www.meterbuilder.com/mb1/evaluating-couplers.html

Please let me know if you have any additional questions.

73,
Lou - K2FP

--- In meterbuilder@yahoogroups.com, "kc8fws" <Michael_MSN@...> wrote:
>
> Hi All,
>
> I really like what i see about this meter but have a quick qestion. I see on the website WaveNode's hf couplers are mentioned. Will the MB-1 work with all their couplers. Im a VHF weak signal guy and run about a kilowatt on 2 meters and am curious if i can get the same typical MB1 accuracy using the Wavenode UHF-2K coupler.
>
> Thanks,
> Mike
>

36. Basic Start-up - CalibratingMB-HF1 Coupler

Yahoo group: meterbuilder
Date: 2012-07-22 01:51:45 UTC
From: jsternmd@att.net
Topic: 36 Message: 36

I went throught the calibration procedure in the Quick Start guide. As a reference I have a recent NIST-source calibrated HP437B.

After adjusting forward coupler trim pot to 50W, I swapped the coax cables from dummy load and TX going to MB-HF1 and adjusted for single point DC voltage at 50W. In the Reflected Channel Calibration mode this looked good with correct 50W showing in REF vale on the LCD.

So I thought I was done and gave M2 a long press. Before swapping coax cables back to 'normal' state I hit xmit and instead of seeing 50W in the REF value I only saw 2.63W. I set back the xmtr power to 5 watts and the REF LCD value was correct at 5W but as I increased power REF value topped at 9.8W and stayed there with xmtr power increments up to about 35w and then it dropped to 2.63W and stayed there as I incremented xmtr power up to 50W. Now my HP437B was still hooked up after the MB-HF1 and it showed correct Power and the voltaged on the REF RCA Y coupler also were correct at various power settings. Why doesnt the REF show the correct power when the xmtr output ges into the load connector? Arent the FWD and REF circuitry in the MB-HF1 connectors really identical?
I hope I explained everything clearly.

73 Jerry
K1JOS

37. Re: Basic Start-up - CalibratingMB-HF1 Coupler

Yahoo group: meterbuilder
Date: 2012-07-22 23:15:31 UTC
From: meterbuilder@att.net
Topic: 36 Message: 37

Hi Jerry.

MB-1 will not give the correct readings (even taking into account that FWD pwr will be shown as REFL power, and REF power will be shown as FWD pwr) with the Coax cables or the RCA jacks swapped. That's why there is a separate "REFL CHAN CALIB" mode. This is due to the way the front end amp between the coupler and the A-to-D input is controlled by the software in normal operation. The gain for the FWD channel is always expected to be less than or equal to the gain needed for the REFL channel in normal operation since the FWD voltage from the coupler will always be greater than the REFL voltage for any non infinite swr. The REFL Channel calib mode ignores this constraint and allows you to get a valid REFL reading (the FWD voltage from the coupler is ignored in this mode).

Do the measurements make sense when all the cables are connected properly?

If I misunderstood the question, let me know and we'll give it another shot.

73,
Lou - K2FP

--- In meterbuilder@yahoogroups.com, "jsternmd@..." <jsternmd@...> wrote:
>
> I went throught the calibration procedure in the Quick Start guide. As a reference I have a recent NIST-source calibrated HP437B.
>
> After adjusting forward coupler trim pot to 50W, I swapped the coax cables from dummy load and TX going to MB-HF1 and adjusted for single point DC voltage at 50W. In the Reflected Channel Calibration mode this looked good with correct 50W showing in REF vale on the LCD.
>
> So I thought I was done and gave M2 a long press. Before swapping coax cables back to 'normal' state I hit xmit and instead of seeing 50W in the REF value I only saw 2.63W. I set back the xmtr power to 5 watts and the REF LCD value was correct at 5W but as I increased power REF value topped at 9.8W and stayed there with xmtr power increments up to about 35w and then it dropped to 2.63W and stayed there as I incremented xmtr power up to 50W. Now my HP437B was still hooked up after the MB-HF1 and it showed correct Power and the voltaged on the REF RCA Y coupler also were correct at various power settings. Why doesnt the REF show the correct power when the xmtr output ges into the load connector? Arent the FWD and REF circuitry in the MB-HF1 connectors really identical?
> I hope I explained everything clearly.
>
> 73 Jerry
> K1JOS
>

38. Re: Basic Start-up - CalibratingMB-HF1 Coupler

Yahoo group: meterbuilder
Date: 2012-07-23 13:22:00 UTC
From: Jerry
Topic: 36 Message: 38

Ok, now I understand. Just wanted to make sure no an issue with the coupler or meter

73 Jerry
K1jos

Sent from my iPad

39. Found the meter ad

Yahoo group: meterbuilder
Date: 2012-08-17 21:06:24 UTC
From: Walt Wilson
Topic: 39 Message: 39

I found the meter ad and this group online, but I have not seen a price listed for the meter on the home page or where to purchase it

40. Re: [meterbuilder] Found the meter ad

Yahoo group: meterbuilder
Date: 2012-08-19 02:21:17 UTC
From: Charles Scott
Topic: 39 Message: 40

Walt:

The URL for MeterBuilder is listed in the description of this group.

http://meterbuilder.com/

You should find information on purchasing there.

Chuck - N8DNX

On 8/17/2012 5:06 PM, Walt Wilson wrote:
>
> I found the meter ad and this group online, but I have not seen a
> price listed for the meter on the home page or where to purchase it
>
>

41. Re: [meterbuilder] Found the meter ad

Yahoo group: meterbuilder
Date: 2012-08-19 02:20:09 UTC
From: Richard W. Solomon
Topic: 39 Message: 41

Right here:

http://meterbuilder.com/mb1/prices.html

73, Dick, W1KSZ

-----Original Message-----
From: Walt Wilson
Sent: Aug 17, 2012 2:06 PM
To: meterbuilder@yahoogroups.com
Subject: [meterbuilder] Found the meter ad

?

I found the meter ad and this group online, but I have not seen a price listed for the meter on the home page or where to purchase it

42. My assembly...

Yahoo group: meterbuilder
Date: 2012-09-04 18:35:52 UTC
From: m0dbl
Topic: 42 Message: 42

Hi all,
I have put one together and am currently on the calibration. I think it's a little off, but that is probably on my end. I am in the process of researching this. Here's the bottom line: the RF meter on both the MFJ 949E VersaTuner II and on my radio indicate more power than cal did. I kinda wish I had a known calibrated (IE: bird wattmeter) to confirm what I am wondering. I also did the cal in the 20M band and have since noticed that it seems to use 80M as a starting point. I think there is also a post on this from within the week. I will get back to this part. That said, I am very impressed with the meterbuilder! The few problems save one (bad high precision pot on the front reads open regardless of setting) have been all my own/learning curve. I'm working on a more in depth review including some in process pics. I have no problem recommending it to other ham friends who would like a fun project and are capable. That's the only caveat, as stated on the website. I didn't find it hard at all. I forgot, this has one other major issue, it has given me the bug/itch to build more projects like this one. :) This is definitely not a bad thing. All said it's taken me a very leisurely 18 hrs including inventory of parts, using it and cal to this point. Bottom line: 2 thumbs way up!

Cheers,
Mike KB2SVN (Extra)/M0DBL (A-class, UK)

43. Re: My assembly...

Yahoo group: meterbuilder
Date: 2012-09-06 14:30:24 UTC
From: meterbuilder@att.net
Topic: 42 Message: 43

Hi Mike.

Thanks very much for the comments.

As far as the calibration, the benchmark power/voltage points listed on the MB-1 couplers have matched up very closely with my Mini-Circuits PWR6GHS (which is NIST traceable). But if you can borrow a reliable reference, and there is still a mismatch, let me know. As far as the other popular digital meters, based on my experience, the Alpha 4510 series is the most accurate, so if you can borrow one, that's your best bet for verifying the MB-1 calibration. A BIRD will only guarantee +-5% at full scale.

Let me know if you are still having problems with the 10 turn pot. If so, I'll send you a new one.

It turns out that the MB-1 coupler is relatively flat across the the HF bands, so you will get the best results by leaving the band set to its default calibration band (which is 80 meters). If you decide to add your own couplers to MB-1, you will find the band correction useful if the coupler being added is not flat.

Let me know if you have any other questions.

73,
Lou - K2FP

--- In meterbuilder@yahoogroups.com, "m0dbl" <m0dbl@...> wrote:
>
> Hi all,
> I have put one together and am currently on the calibration. I think it's a little off, but that is probably on my end. I am in the process of researching this. Here's the bottom line: the RF meter on both the MFJ 949E VersaTuner II and on my radio indicate more power than cal did. I kinda wish I had a known calibrated (IE: bird wattmeter) to confirm what I am wondering. I also did the cal in the 20M band and have since noticed that it seems to use 80M as a starting point. I think there is also a post on this from within the week. I will get back to this part. That said, I am very impressed with the meterbuilder! The few problems save one (bad high precision pot on the front reads open regardless of setting) have been all my own/learning curve. I'm working on a more in depth review including some in process pics. I have no problem recommending it to other ham friends who would like a fun project and are capable. That's the only caveat, as stated on the website. I didn't find it hard at all. I forgot, this has one other major issue, it has given me the bug/itch to build more projects like this one. :) This is definitely not a bad thing. All said it's taken me a very leisurely 18 hrs including inventory of parts, using it and cal to this point. Bottom line: 2 thumbs way up!
>
> Cheers,
> Mike KB2SVN (Extra)/M0DBL (A-class, UK)
>

44. MB-1 in November QST!

Yahoo group: meterbuilder
Date: 2012-10-15 19:16:02 UTC
From: hamradioo
Topic: 44 Message: 44

Just to let you Guys know that the MB-1 is listed on page 49 of the November 2012 QST - as a New product. Hope to see a detailed QST review one day!

45. Displaying more than one coupler at a time?

Yahoo group: meterbuilder
Date: 2013-02-13 21:02:05 UTC
From: LARRY WOLFGANG
Topic: 45 Message: 45

I recently completed the assembly, and everything seems to work great. With inputs for 4 different couplers, and all sorts of possibilities for the type of coupler, I have been looking for a way to display data from one coupler on some of the display options, and data from another coupler on another display option, such as the external LEDs. Has anyone found this to be possible? Thanks.

46. RE: [meterbuilder] Displaying more than one coupler at a time?

Yahoo group: meterbuilder
Date: 2013-02-13 23:03:58 UTC
From: Bill Morton
Topic: 45 Message: 46

I have several couplers (heat and different RF) but as far as I know only one can be displayed at any one time. I contacted Lou about this early after I built mine and he said it was both a software and hardware change that would be necessary to display different couplers at the same time - "maybe in the next version"

73's
Bill
W4ASE

47. Re: Displaying more than one coupler at a time?

Yahoo group: meterbuilder
Date: 2013-02-25 17:24:37 UTC
From: meterbuilder@att.net
Topic: 45 Message: 47

Hi Larry.

Unfortunately, MB-1 can only process one coupler at a time. The constraint exists because of the real time processing commands for peak power, average power, and the like.

73,
Lou - K2FP

--- In meterbuilder@yahoogroups.com, "LARRY WOLFGANG" <larrywolfgang@...> wrote:
>
> I recently completed the assembly, and everything seems to work great. With inputs for 4 different couplers, and all sorts of possibilities for the type of coupler, I have been looking for a way to display data from one coupler on some of the display options, and data from another coupler on another display option, such as the external LEDs. Has anyone found this to be possible? Thanks.
>

48. MB-1 Now Assembled or Kit

Yahoo group: meterbuilder
Date: 2013-07-02 13:45:40 UTC
From: hamradioo
Topic: 48 Message: 48

Hi guys,
Just dropping a note that the MB-1 is now available assembled and tested as well as in kit form. Check the web for pricing.
John

49. MB1 Thoughts and Questions

Yahoo group: meterbuilder
Date: 2013-12-30 05:19:28 UTC
From: w7ry_1
Topic: 49 Message: 49

I would like to have one of these, but a few things holding me back...

2 couplers:
It looks like the meter wont display multiple couplers at the same time. This would really be a great feature. Especially for a SO2R contesting setup which I run. Having just one one meter would be super handy and economical. At least a software update so whichever coupler has power flowing through it, first (in SO2R, there is only one signal on the band at once)that is the one displayed.

Calibration:
There really has to be a way other than using another meter to calibrate another coupler. Could you use an accurate 4 or 5 digit DVM to measure the new coupler and refrence the stock coupler voltage?

Accuracy:
I have noticed that the Alpha meter and the LP100 are very close in readings. And the Power Master, (which I own 2 of, and are not the close to each other) reads quite a bit low. What have other noticed?

Looks like a great product and I'm watching quite a few U-Tube videos on the MB1. Impressive!

73
Jim W7RY

50. Re: [meterbuilder] MB1 Thoughts and Questions

Yahoo group: meterbuilder
Date: 2013-12-30 16:53:08 UTC
From: Charles Scott
Topic: 49 Message: 50

Jim:

Welcome to the discussion.

The V2 beta firmware that's available for download on the MeterBuilder web site has a preliminary multi-coupler display mode that will show power for 4 couplers. They have a page on this capability at the following URL. This is something a number of us asked for.

http://www.meterbuilder.com/mb1/multi-coupler-display.html

As far as calibration is concerned, referencing the stock coupler voltage might not be a good idea unless the couplers are identical. You could, however, put a new coupler in series with an already calibrated coupler and measure the new coupler voltage (using something else) at desired power levels. To do this I think you'd want it to be seeing the same load it will when it's connected to the MB1, which I believe is about 300K ohms. You could then use those voltages to calibrate the new coupler with the MB1 at those power levels by monitoring the voltage using the same voltmeter tapped off the the input to the MB1. The MeterBuilder guys might have more thoughts on this, but this might be one approach.

If you're really looking for accuracy, the best way to check your measurements is with a calorimeter based measurement. There's probably good ways to put one together if you really want to get crazy, but the question is whether it really makes that much difference in practical use. Pick something for a reference that you tend to believe and go with it (I have some Bird elements that all tend to agree and have gone with that). Of course if you have some need for a more accurate calibration, perhaps we can come up with a plan.

Chuck - N8DNX

On 12/30/2013 12:19 AM, w7ry_1 wrote:
>
> I would like to have one of these, but a few things holding me back...
>
> 2 couplers:
> It looks like the meter wont display multiple couplers at the same
> time. This would really be a great feature. Especially for a SO2R
> contesting setup which I run. Having just one one meter would be super
> handy and economical. At least a software update so whichever coupler
> has power flowing through it, first (in SO2R, there is only one signal
> on the band at once)that is the one displayed.
>
> Calibration:

> There really has to be a way other than using another meter to
> calibrate another coupler.
> Could you use an accurate 4 or 5 digit DVM to measure the new coupler
> and refrence the stock coupler voltage?
>
> Accuracy:
> I have noticed that the Alpha meter and the LP100 are very close in
> readings. And the Power Master, (which I own 2 of, and are not the
> close to each other) reads quite a bit low. What have other noticed?
>
> Looks like a great product and I'm watching quite a few U-Tube videos
> on the MB1. Impressive!
>
> 73
> Jim W7RY
>

51. Ver 2.0 Upgrade

Yahoo group: meterbuilder
Date: 2013-12-30 19:06:54 UTC
From: Richard Solomon
Topic: 51 Message: 51

I just finished installing Ver 2.0 (I wish MS updates went so smoothly).

Works like you said it would.

This makes a great instrument even better.

73 es HNY, Dick, W1KSZ

52. Re: MB1 Thoughts and Questions

Yahoo group: meterbuilder
Date: 2013-12-31 20:45:55 UTC
From: meterbuilder@att.net
Topic: 49 Message: 52

Hi Jim.

Chuck's response is on target.

A couple of additional points - The multiple coupler display feature is still in beta mode, but it seems to be working reasonably well. When displaying multiple couplers, the display is limited to TUNE (instantaneous) power only, which is the mode you would be using for key down adjusments. Up to 4 couplers (or combinations of couplers and other sensors) can be displayed simultaneously.

The meterbuilder website suggests how you can place the MB1 coupler in tandem with a coupler being calibrated. Voltage measurements from the MB-1 would be used to dial in known power levels for the calibration.

Hope this helps.

73,
Lou K2FP

--- In meterbuilder@yahoogroups.com, "w7ry_1" <jimw7ry@...> wrote:
>
> I would like to have one of these, but a few things holding me back...
>
> 2 couplers:
> It looks like the meter wont display multiple couplers at the same time. This would really be a great feature. Especially for a SO2R contesting setup which I run. Having just one one meter would be super handy and economical. At least a software update so whichever coupler has power flowing through it, first (in SO2R, there is only one signal on the band at once)that is the one displayed.
>
> Calibration:
> There really has to be a way other than using another meter to calibrate another coupler.
> Could you use an accurate 4 or 5 digit DVM to measure the new coupler and refrence the stock coupler voltage?
>
> Accuracy:
> I have noticed that the Alpha meter and the LP100 are very close in readings. And the Power Master, (which I own 2 of, and are not the close to each other) reads quite a bit low. What have other noticed?
>
> Looks like a great product and I'm watching quite a few U-Tube videos on the MB1. Impressive!
>
> 73
> Jim W7RY
>

53. Re: Ver 2.0 Upgrade

Yahoo group: meterbuilder
Date: 2013-12-31 20:47:32 UTC
From: meterbuilder@att.net
Topic: 51 Message: 53

Hi Dick.

Glad the update went smoothly. The bootloader is home grown.
73,
Lou K2FP

--- In meterbuilder@yahoogroups.com, Richard Solomon <w1ksz@...> wrote:
>
> I just finished installing Ver 2.0 (I wish MS updates went so smoothly).
>
> Works like you said it would.
>
> This makes a great instrument even better.
>
> 73 es HNY, Dick, W1KSZ
>

54. Re: MB1 Thoughts and Questions

Yahoo group: meterbuilder
Date: 2013-12-31 21:38:46 UTC
From: meterbuilder@att.net
Topic: 49 Message: 54

Jim,

the voltage vs. power table for the MB1 coupler can be found on

http://www.meterbuilder.com/mb1/bird-line-sections.html

73,
Lou K2FP

--- In meterbuilder@yahoogroups.com, "w7ry_1" <jimw7ry@...> wrote:
>
> I would like to have one of these, but a few things holding me back...
>
> 2 couplers:
> It looks like the meter wont display multiple couplers at the same time. This would really be a great feature. Especially for a SO2R contesting setup which I run. Having just one one meter would be super handy and economical. At least a software update so whichever coupler has power flowing through it, first (in SO2R, there is only one signal on the band at once)that is the one displayed.
>
> Calibration:
> There really has to be a way other than using another meter to calibrate another coupler.
> Could you use an accurate 4 or 5 digit DVM to measure the new coupler and refrence the stock coupler voltage?
>
> Accuracy:
> I have noticed that the Alpha meter and the LP100 are very close in readings. And the Power Master, (which I own 2 of, and are not the close to each other) reads quite a bit low. What have other noticed?
>
> Looks like a great product and I'm watching quite a few U-Tube videos on the MB1. Impressive!
>
> 73
> Jim W7RY
>

55. Re: [meterbuilder] Re: MB1 Thoughts and Questions

Yahoo group: meterbuilder
Date: 2014-01-01 05:35:07 UTC
From: Jim W7RY
Topic: 49 Message: 55

Cool thanks!
73
Jim W7RY

On 12/31/2013 1:38 PM, meterbuilder@... wrote:
>
>
>
> Jim,
>
> the voltage vs. power table for the MB1 coupler can be found on
>
> http://www.meterbuilder.com/mb1/bird-line-sections.html
>
> 73,
> Lou K2FP
>
> --- In meterbuilder@yahoogroups.com, "w7ry_1" <jimw7ry@...> wrote:
> >
> > I would like to have one of these, but a few things holding me back...
> >
> > 2 couplers:
> > It looks like the meter wont display multiple couplers at the same
> time. This would really be a great feature. Especially for a SO2R
> contesting setup which I run. Having just one one meter would be super
> handy and economical. At least a software update so whichever coupler
> has power flowing through it, first (in SO2R, there is only one signal
> on the band at once)that is the one displayed.
> >
> > Calibration:
> > There really has to be a way other than using another meter to
> calibrate another coupler.
> > Could you use an accurate 4 or 5 digit DVM to measure the new
> coupler and refrence the stock coupler voltage?
> >
> > Accuracy:
> > I have noticed that the Alpha meter and the LP100 are very close in
> readings. And the Power Master, (which I own 2 of, and are not the
> close to each other) reads quite a bit low. What have other noticed?
> >
> > Looks like a great product and I'm watching quite a few U-Tube
> videos on the MB1. Impressive!
> >
> > 73
> > Jim W7RY

> >
>
>

56. MB1 Verson 2

Yahoo group: meterbuilder
Date: 2014-01-15 05:52:46 UTC
From: Jim W7RY
Topic: 56 Message: 56

Now that version 2.0 is out, can you now calibrate other sensors with the MB1 itself instead of using an external wattmeter?

Thanks
73
Jim W7RY

57. Re: [meterbuilder] MB1 Verson 2

Yahoo group: meterbuilder
Date: 2014-01-15 14:59:03 UTC
From: Charles Scott
Topic: 56 Message: 57

Jim:

There was a recent discussion regarding this topic. Here's a posting from Lou at MeterBuilder. Read the second paragraph. There may be other postings in that discussion that would be of value. In essence, you would use a calibrated coupler in tandem with one you want to calibrate and note the voltage measurements then use those for calibration.

https://groups.yahoo.com/neo/groups/meterbuilder/conversations/messages/52

Let us know if you can't find the information.

Chuck - N8DNX

On 1/15/2014 12:52 AM, Jim W7RY wrote:
>
>
> Now that version 2.0 is out, can you now calibrate other sensors with
> the MB1 itself instead of using an external wattmeter?
>
> Thanks
> 73
> Jim W7RY
>
> __._,_
>
>

--
Charles Scott, President
Gaslight Media
120 E. Lake Street
Petoskey, MI 49770
http://www.gaslightmedia.com

E-Mail: cscott@...
Office: 231-487-0692

58. Re: MB1 Verson 2

Yahoo group: meterbuilder
Date: 2014-01-15 15:47:45 UTC
From: meterbuilder@att.net
Topic: 56 Message: 58

Hi Jim.

I updated the Measurements category of the FAQ with two alternatives. See the following:
http://meterbuilder.com/mb1/faq.html#Q:_Can_I_calibrate_other_power_sensors_using_the_MB-1_as_its_own_reference_

73,
Lou K2FP

--- In meterbuilder@yahoogroups.com, Jim W7RY <jimw7ry@...> wrote:
>
>
> Now that version 2.0 is out, can you now calibrate other sensors with
> the MB1 itself instead of using an external wattmeter?
>
> Thanks
> 73
> Jim W7RY
>

59. Re: MB1 Verson 2

Yahoo group: meterbuilder
Date: 2014-01-15 17:52:33 UTC
From: Fred Serota
Topic: 56 Message: 59

Sir:
Where do you see version 2? How do we get it? There is nothing on the web site that I can see

Fred, K3BHX

60. Re: MB1 Verson 2

Yahoo group: meterbuilder
Date: 2014-01-15 18:26:04 UTC
From: meterbuilder@att.net
Topic: 56 Message: 60

Hi Fred.
It is in the download page:
http://meterbuilder.com/mb1/downloads.html

73
Lou K2FP

--- In meterbuilder@yahoogroups.com, "Fred Serota" <fserota@...> wrote:
>
> Sir:
> Where do you see version 2? How do we get it? There is nothing on the web site that I can see
>
> Fred, K3BHX
>

61. Re: [meterbuilder] Re: MB1 Verson 2

Yahoo group: meterbuilder
Date: 2014-01-16 02:50:47 UTC
From: Jim W7RY
Topic: 56 Message: 61

Very cool thanks!

73
Jim W7RY

On 1/15/2014 7:47 AM, meterbuilder@... wrote:
>
>
>
> Hi Jim.
>
> I updated the Measurements category of the FAQ with two alternatives.
> See the following:
> http://meterbuilder.com/mb1/faq.html#Q:_Can_I_calibrate_other_power_sensors_using_the_MB-1_as_its_own_reference_
>
> 73,
> Lou K2FP
>
> --- In meterbuilder@yahoogroups.com, Jim W7RY <jimw7ry@...> wrote:
> >
> >
> > Now that version 2.0 is out, can you now calibrate other sensors with
> > the MB1 itself instead of using an external wattmeter?
> >
> > Thanks
> > 73
> > Jim W7RY
> >
>
>

62. New customer

Yahoo group: meterbuilder
Date: 2014-02-08 14:11:03 UTC
From: wx2s_steve
Topic: 62 Message: 62

After looking at the YouTube video, I just canceled an open order for the Alpha 4620 and put in order for the MB1. It just looked like a lot more tool for a little less money. Let you know how it goes when I've got it built.

73,
Steve wx2s.

63. Re: New customer

Yahoo group: meterbuilder
Date: 2014-02-10 14:50:51 UTC
From: meterbuilder@att.net
Topic: 62 Message: 63

Thanks Steve. Hope you enjoy your MB-1.

73,
Lou K2FP

--- In meterbuilder@yahoogroups.com, "wx2s_steve" <wx2s@...> wrote:
>
> After looking at the YouTube video, I just canceled an open order for the Alpha 4620 and put in order for the MB1. It just looked like a lot more tool for a little less money. Let you know how it goes when I've got it built.
>
> 73,
> Steve wx2s.
>

64. Took the Plunge

Yahoo group: meterbuilder
Date: 2014-02-17 05:27:06 UTC
From: Jim W7RY
Topic: 64 Message: 64

Just took the plunge and ordered one!

Looking forward to getting it.

73
Jim W7RY

65. RE: Took the Plunge

Yahoo group: meterbuilder
Date: 2014-02-17 16:59:52 UTC
From: <meterbuilder@...>
Topic: 64 Message: 65

Thanks Jim.

73,
Lou K2FP

66. Re: New customer

Yahoo group: meterbuilder
Date: 2014-03-28 18:50:47 UTC
From: <wx2s@...>
Topic: 62 Message: 66

As promised, here is my follow-up.

I got the meter built over a couple of weekends and it is now working fine. There were a couple of issues with missing parts in the kit, and Lou was extremely helpful in getting them sorted. The only build issue was a poorly soldered pin, which was easily found and fixed.

I wish I had a decent way to check the coupler calibration. The meter disagrees with both my K3 power level (reads higher than the K3) and my 9500's power meter (reads lower than the 9500.) Neither of these devices is calibrated, so I'm not too worried.

Under the "wish it did it this way" department, I wish I could select PEAK and MAX arbitrarily for any measured value, rather than for only for a single value each. The difference is that the PEAK value auto-resets after a short time period, but the MAX must be reset manually. Both have their uses. I wanted to monitor peak forward and peak delivered power, and there is no way to do that with the current firmware. I suggested this as a future improvement to Lou, and he put it on his list.

Bottom line: I am quite pleased with both the meter and the level of service.

73,
- Steve WX2S.

67. Re: New customer

Yahoo group: meterbuilder
Date: 2014-03-31 13:47:18 UTC
From: <meterbuilder@...>
Topic: 62 Message: 67

Steve,
Thanks for the update and the feedback.

73
Lou K2FP

68. Product Improvement Suggestion

Yahoo group: meterbuilder
Date: 2014-07-04 16:46:14 UTC
From: w1ksz@...
Topic: 68 Message: 68

I find that the present Connector configuration (on the top of the Coupler) requires me to use Right Angle UHF connectors so as not to need a second cable.

I have two Filters mounted on the operating desk side wall and the Couplers are connected to them.

If the connectors were placed on the ends of the coupler then one Male - Male adapter would suffice.

I know this is a major change, but I feel it would be worthwhile.

All that aside, the MB-1 is still the best on the market.

73, Dick, W1KSZ

69. Power Reading Differences

Yahoo group: meterbuilder
Date: 2014-07-04 17:31:28 UTC
From: w1ksz@...
Topic: 69 Message: 69

I have been testing my "new" (used) Quadra Amp and noticed a difference in the Power Reading between the MB-1 Meter and the LED Display.

Here are the readings I took, Freq = 14.265

Quadra 1,000 Watts

Kenwood SW-2000 1,000 Watts

MB-1 Meter 1,000 Watts (Coupler is MB-1 Coupler that came with it)

MB-1 LED Display 914 Watts

Now reading Analog Meters can be somewhat non-precise, but my readings were close.

The difference between the MB-1 Meter and the LED Display concerns me.
I re-loaded the factory default Cal settings ... no change.

Any ideas ??

Tnx, Dick, W1KSZ

70. Re: [meterbuilder] Power Reading Differences

Yahoo group: meterbuilder
Date: 2014-07-05 02:04:52 UTC
From: Richard Solomon
Topic: 69 Message: 70

Cancel this ... crackpot in cockpit !!

I forgot I had diddled with the settings, so I reset to the default Cal settings
and it's much better !!

73, Dick, W1KSZ

On 7/4/2014 10:31 AM, w1ksz@... [meterbuilder] wrote:
>
>
> I have been testing my "new" (used) Quadra Amp and noticed a
> difference in the
> Power Reading between the MB-1 Meter and the LED Display.
>
> Here are the readings I took, Freq = 14.265
>
> Quadra 1,000 Watts
>
> Kenwood SW-2000 1,000 Watts
>
> MB-1 Meter 1,000 Watts (Coupler is MB-1 Coupler that came with it)
>
> MB-1 LED Display 914 Watts
>
> Now reading Analog Meters can be somewhat non-precise, but my readings
> were
> close.
>
> The difference between the MB-1 Meter and the LED Display concerns me.
> I re-loaded the factory default Cal settings ... no change.
>
> Any ideas ??
>
> Tnx, Dick, W1KSZ
>
>
>
>
>

71. Re: Product Improvement Suggestion

Yahoo group: meterbuilder
Date: 2014-07-05 21:33:20 UTC
From: meterbuilder@...
Topic: 68 Message: 71

Hi Dick.

We just got a new batch of couplers with the same housing. I will look into the options on the next order.

Thanks again for the feedback. Glad you are enjoying the Meter.

73
Lou K2FP

72. Re: [meterbuilder] Re: Product Improvement Suggestion

Yahoo group: meterbuilder
Date: 2014-07-05 21:45:20 UTC
From: Richard Solomon
Topic: 68 Message: 72

OK, thanks for the reply.

I would be willing to purchase a couple in the new configuration if it comes to pass.

73, Dick, W1KSZ

On 7/5/2014 2:33 PM, meterbuilder@... [meterbuilder] wrote:
>
>
> Hi Dick.
>
> We just got a new batch of couplers with the same housing. I will
> look into the options on the next order.
>
> Thanks again for the feedback. Glad you are enjoying the Meter.
>
> 73
> Lou K2FP
>
>
>
>

73. Autorange Question

Yahoo group: meterbuilder
Date: 2014-07-10 16:54:18 UTC
From: w1ksz@...
Topic: 73 Message: 73

I have the P1 function set to tune and R1=20* (Autorange), but when I key the Amp it goes to
200 Watts on the LED Display (Tune Power) and the Analog Meter pegs.

The Main Display shows 200W in the upper right corner.

How do I set it so the P1 display goes to 2000 Watts ?

Tnx, Dick, W1KSZ

74. Re: Autorange Question

Yahoo group: meterbuilder
Date: 2014-07-10 21:56:55 UTC
From: w1ksz@...
Topic: 73 Message: 74

After digging into this more, I find that the Full Scale Power Reading is set (I think) by the
values in the OEM Codes. For example, Coupler 1 has a Code OEM#1, FS=2000W,
but, coupler 2 has an OEM#21, FS=20W.

So, I think I need to change the OEM Codes in Couplers 2, 3 & 4. But, the $64 question is how ???

If I look in Section 5.3 of the manual and follow the steps, I get hung up at the Setup screen. It
doesn't look like the one in the manual and I can't get to a screen to select OEM Codes.

Maybe I am looking in the wrong place in the manual ??

At this point, I really need help.

73, Dick, W1KSZ

75. Re: Autorange Question

Yahoo group: meterbuilder
Date: 2014-07-11 14:31:15 UTC
From: meterbuilder@...
Topic: 73 Message: 75

Dick

Are you using the MB-1 coupler (port 1) or does this overrange problem relate to other couplers you have added to ports 2-4? (No need to deal with the OEM codes).

If you are dealing with the default coupler (port 1), and you have the autorange turned on on the Panel Meter, the panel meter should autorange, and you should never see the analog meter pegged unless you are exceeding 2000 w. (The 3 ranges on the panel meter are 20w, 200w, and 2000w).

Select the Panel Meter Menu on line 3 of the LCD. If you have the autorange on for the panel meter, you will see the asterisk next to the right-most field. As you increase power above the 20w, the 200w threshold, you will see the numeric value of the last field in the panel meter menu change to show you the current PM range.

You can place the PM in manual mode (turn off the AutoRange (Long push of bottom left button until green LED on that switch is off (and * is off in menu)). Then you can set the manual range pf the PM by tapping Menu button M3 (20w -> 200w ->2000w ->back to 20w, etc).

Let me know how you make out. Section 3.14 in the User Manual covers this, but the nutsheel version above should help.

73
Lou K2FP

76. Re: Autorange Question

Yahoo group: meterbuilder
Date: 2014-07-11 14:53:50 UTC
From: meterbuilder@...
Topic: 73 Message: 76

Dick

just one more thought - check the calibration of the Panel Meter.

One quick way is to apply approx 19w (keep it under 20 to prevent possible autoranging). If the numeric displays agree with the PM, you are probably OK.

If not, the end section of section 8.6 (Testing Panel Meter Calibration) describes how to test the PM calibration with MB-1 software (no power applied), and sect 8.7 describes how to EDIT the calibration if the calibration is off.

Let me know how this works out.

73
Lou K2FP

77. Re: [meterbuilder] Re: Autorange Question

Yahoo group: meterbuilder
Date: 2014-07-11 15:54:55 UTC
From: Richard Solomon
Topic: 73 Message: 77

The Panel Cal was one of the first things I did.

I think the problem is in the OEM Code in Couplers 2, 3 & 4. I need to change two of them (2 & 3)
so I can use a Coupler at High Power.

I read Section 5.3.2 of the Manual, but I cannot get past the Setup Screen to the Screen that
will allow me to change the OEM Code.

How do I change the OEM Code ??

73, Dick, W1KSZ

On 7/11/2014 7:53 AM, meterbuilder@... [meterbuilder] wrote:
>
>
> Dick
>
> just one more thought - check the calibration of the Panel Meter.
>
> One quick way is to apply approx 19w (keep it under 20 to prevent
> possible autoranging). If the numeric displays agree with the PM, you
> are probably OK.
>
> If not, the end section of section 8.6 (Testing Panel Meter
> Calibration) describes how to test the PM calibration with MB-1
> software (no power applied), and sect 8.7 describes how to EDIT the
> calibration if the calibration is off.
>
> Let me know how this works out.
>
> 73
> Lou K2FP
>
>

78. Re: [meterbuilder] Re: Autorange Question

Yahoo group: meterbuilder
Date: 2014-07-11 16:06:19 UTC
From: meterbuilder@...
Topic: 73 Message: 78

Dick

when prompted to "ERASE PREV SETTINGS", answer Y. You should then be able to set the OEM code.

73
Lou K2FP

79. Re: [meterbuilder] Re: Autorange Question

Yahoo group: meterbuilder
Date: 2014-07-11 16:33:31 UTC
From: Richard Solomon
Topic: 73 Message: 79

When I bring up the Coupler Menu, I get this Screen:

TUN 0.00w PKF 0.0w
REF 0.00w SWR ---
COUP1 BANK=R TRIM S

Then I press Setup and get this Screen:

COUP=1, TYP=POWER
FS=2000w
#CAL PTS=19 OEM#=1
TRIM = 1.000000

There is no prompt available to go any further.

The problem I have is with Coupler #2, where the OEM number is 21, FS=20w

That OEM Number (21) is the one I need to change.

73, Dick, W1KSZ

On 7/11/2014 9:06 AM, meterbuilder@... [meterbuilder] wrote:
>
>
> Dick
>
> when prompted to "ERASE PREV SETTINGS", answer Y. You should then be
> able to set the OEM code.
>
> 73
> Lou K2FP
>
>

80. Re: [meterbuilder] Re: Autorange Question

Yahoo group: meterbuilder
Date: 2014-07-11 17:26:00 UTC
From: meterbuilder@...
Topic: 73 Message: 80

Dick

the button you are hitting (top right button) has two functions:

Display Settings for current menu (short tap)
Go into SET-UP mode for current menu (long press).

It looks like you are using the short tap (Display).

Try the long press of the Display/Set-up button.

Also, remember to change the coupler number to the coupler you want to modify the settings for (coupler 2 and 3 in your case.

73
Lou K2FP

81. Expansion Kit

Yahoo group: meterbuilder
Date: 2014-08-29 14:18:47 UTC
From: bobsmacbox@...
Topic: 81 Message: 81

I built the meter, but can't get the expansion displays working. I have the two pairs of 5v pins jumpered. I connected them to the back as per the instructions. When I try to set the displays the menu will only go up to D4.

Any advise will be appreciated.

Bob/NZ2Z

82. Expansion kit

Yahoo group: meterbuilder
Date: 2014-08-29 15:49:55 UTC
From: bobsmacbox@...
Topic: 82 Message: 82

I can't get the meter to show D5 and 6 after
I have connected 2 external meters.

Bob/NZ2Z

83. Re: Expansion kit

Yahoo group: meterbuilder
Date: 2014-08-30 13:23:04 UTC
From: meterbuilder@...
Topic: 82 Message: 83

Hi Bob.

On the 2 issues.

Some external 7-seg displays may require a "C" mode in the third field. See

" Q: The Seven Segment Display Test is failing - External 7-Segment LEDs"

on the troubleshooting page:
MB-1 - Troubleshooting http://www.meterbuilder.com/mb1/troubleshooting.html

Regarding D5 and D6, the default settings are set to display one ext 7-seg module and the large ext Bar Graph, so with the defaults, you will only see D1-D5 (since the second ext port is set to drive the Bar Graph.
In any case, you should always see D5.

Please keep me posted.

73
Lou K2FP

http://www.meterbuilder.com/mb1/troubleshooting.html

MB-1 - Troubleshooting http://www.meterbuilder.com/mb1/troubleshooting.html
Troubleshooting - Self Test Failures In the following troubleshooting procedures, always remove power by disconnecting the DC power adapter before swapping ...

View on www.meterbuilder.com http://www.meterbuilder.com/mb1/troubleshooting.html
Preview by Yahoo

84. Re: Expansion kit

Yahoo group: meterbuilder
Date: 2014-08-31 05:00:29 UTC
From: bobsmacbox@...
Topic: 82 Message: 84

Thanks Lou. Got it working. I had to start it up pressing the M4 button and both displays are now working.
Now I have to play around with it a bit more to see what it does.

Bob/NZ2Z

85. Re: Expansion kit

Yahoo group: meterbuilder
Date: 2014-09-02 13:51:04 UTC
From: meterbuilder@...
Topic: 82 Message: 85

Thanks for the update Bob.

Lou

86. Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-07-27 00:21:57 UTC
From: bobsmacbox@...
Topic: 86 Message: 86

I pulled my MB-1 back out to put it in line. I followed all of the instructions and worked along with the video. It does go through the set up procedures and all the meters work in Demo mode. when I transmit, however, none of the meters show any movement.

Been pulling my hair out and reading and re-reading the manuals, including the troubleshooting one, but don't see any solution.

Can someone give me a hand?

Bob/nz2z

87. Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-07-27 15:50:55 UTC
From: ka7gzr@...
Topic: 86 Message: 87

Which coupler are you using for the readings and do you have it selected?
Jim
ka7gzr

88. Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-07-27 16:53:30 UTC
From: meterbuilder@...
Topic: 86 Message: 88

Bob, as Jim suggested, make sure you have selected "REAL" couplers and the correct coupler number (1-4). both of these options are selected from the COUPler menu.

73,
Lou

89. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-07-27 21:32:18 UTC
From: Bob
Topic: 86 Message: 89

I have the RCA jacks plugged into the top two jacks on the left. The bottom row on the screen reads:

COUP1 BANK=REAL TRIM

Bob Bennett
Sent from my iPhone

> On Jul 27, 2015, at 11:50 AM, ka7gzr@... [meterbuilder] <meterbuilder@yahoogroups.com> wrote:
>
> Which coupler are you using for the readings and do you have it selected?
>
> Jim
>
> ka7gzr
>
>

90. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-07-28 14:56:41 UTC
From: meterbuilder@...
Topic: 86 Message: 90

Bob,
make sure the FWD/REV RCA plugs are not reversed. If still no reading, disconnect the coupler from the MB-1, and read the DC voltages on the coupler RCA leads when applying power through the coupler. At 50 watts FWD power, you should be measuring approx 5 - 6 volts DC on the FWD plug.

Let me know how this works out.

73,
LOu

91. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-07-28 16:46:59 UTC
From: bobsmacbox@...
Topic: 86 Message: 91

Lou,

Thanks. I tested it and he FWD plug is giving about 5.5 V and the reverse plug 1.4.

Bob

92. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-07-28 19:54:18 UTC
From: meterbuilder@...
Topic: 86 Message: 92

Bob,
looks like the coupler is OK.

The only other thing to do is to run the self test diagnostic (in particular the COUPLER TEST), which will verify the coupler input circuitry of the MB-1.

See section 3.18 in
http://www.meterbuilder.com/mb1/docs/mb1-user-manual-v1.01.pdf
http://www.meterbuilder.com/mb1/docs/mb1-user-manual-v1.01.pdf

73,
Lou

93. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-07-29 05:26:27 UTC
From: ka7gzr@...
Topic: 86 Message: 93

Bob,
A few ideas:
I assume you have no readings on any of the displays- Panel Meter, LCD and LEDs? If so, what do they display? Have you tried the other 3 coupler inputs and tried a fresh set of RCA cabling between the coupler and The MB-1? How about a "Factory Reset" and load all of the default values?
Jim
ka7gzr

94. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-07-30 20:07:32 UTC
From: Bob Bennett
Topic: 86 Message: 94

The diagnostic seem to check out OK, but when I get to the Coupler Test
I first get the message

RUNNING COUP TEST
NO INPUT SIG DETECTED

then I get message

SIG DET IN PORT 1

But if I put the voltage in to port 2 and 3, I get the same message the
signal is detected on port1.

Again, I want to than you for your help. This is a nice measuring tool
and I cant wait to get it working so that I can run some tests here.

bob/nz2z

On 7/28/15 3:54 PM, meterbuilder@... [meterbuilder] wrote:
>
> Bob,
> looks like the coupler is OK.
>
> The only other thing to do is to run the self test diagnostic (in
> particular the COUPLER TEST), which will verify the coupler input
> circuitry of the MB-1.
>
> See section 3.18 in
> http://www.meterbuilder.com/mb1/docs/mb1-user-manual-v1.01.pdf
>
> 73,
> Lou
>
>

95. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-07-31 14:16:57 UTC
From: meterbuilder@...
Topic: 86 Message: 95

Bob,
I records show that this was a kit purchased in 2013. Was it working at one point after assembly?

Lou

96. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-07-31 15:00:42 UTC
From: Bob
Topic: 86 Message: 96

Yes, I bought it at the Dayton Hamvention. No, After assembly (late last year) it never did read the radios output

Bob - Sent from my iPad

> On Jul 31, 2015, at 10:16 AM, meterbuilder@... [meterbuilder] <meterbuilder@yahoogroups.com> wrote:
>
> Bob,
> I records show that this was a kit purchased in 2013. Was it working at one point after assembly?
>
> Lou
>
>

97. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-07-31 20:44:03 UTC
From: meterbuilder@...
Topic: 86 Message: 97

Bob,
the following link provides troubleshooting information for the coupler circuitry:
http://www.meterbuilder.com/mb1/troubleshooting.html#Q:_The_Coupler_Port_Test_is_failing
http://www.meterbuilder.com/mb1/troubleshooting.html#Q:_The_Coupler_Port_Test_is_failing

Also, check for possible solder bridges on the RCA jack pins associated with the coupler jack, and on the MCP-6S28 pads. This is the chip that processes the signals for the four couplers.

73,
Lou

.

98. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-08-10 05:31:54 UTC
From: Bob Bennett
Topic: 86 Message: 98

Lou.

I’m back at it. Here are my results:

Checking voltages on MCP-6S28 - with no power to the inputs, just the MB-1 turned on.
Pins 1-11 no voltage
Pin 12=4.7 volts
Pin13=.03 to .11 v
Pin 14=0
Pin 15=.12 v
Pin 16=4.93 v

I also found that Pins 1,9,10,12,14 and 16 are all grounded. When I test Pins 13 and 15 to ground I get a buzzing type sound.

Inputting the 200 mv, I get:
Pin 1=2.9 volts
Pin 2=3.06 v
Pin 12=4.7 v
Pin 13=.03 to .11v
Pin 15=.12 v
Pin 16=4.9 v

the other pins give a 0 reading.

I also put the 50 mv to the REV input but got no message in the Coup 1 Test about REV.

As always, I very much appreciate your help.

Bob/nz2z

99. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-08-11 14:15:55 UTC
From: meterbuilder@...
Topic: 86 Message: 99

Hi Bob.
The only pins that should be grounded on the MCP6S28 are pins 10 and 11 (see fig 6 in http://www.meterbuilder.com/mb1/docs/mb1-circuit-description-v1.01.pdf http://www.meterbuilder.com/mb1/docs/mb1-circuit-description-v1.01.pdf).

With power off, remove that chip and repeat the resistance measurements (the chip can provide some impedance to ground even when the unit is not powered).

Also, make sure that none of the 8 coupler pots are turned fully CCW. THis would place the slider of the pot (and the associated MCP6s_28 pin) at ground.

73,
Lou

100. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-11-23 08:20:08 UTC
From: bobsmacbox@...
Topic: 86 Message: 100

Hi Lou,
I ma back at this after a few months of other projects. I did remove the chip and check pins 10 and 11 and they are to ground. The coupler pots are about in mid position.

Bob/nz2z

101. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-11-24 15:00:33 UTC
From: meterbuilder@...
Topic: 86 Message: 101

Hi Bob.

Last time we corresponded, you had an intermittent problem with the power, and with either the LEDS or the panel meter light not lighting. As I indicated, it sounded like a power problem. If that is still the case, you need to trace the power using fig 4 in http://www.meterbuilder.com/mb1/docs/mb1-circuit-description-v1.01.pdf http://www.meterbuilder.com/mb1/docs/mb1-circuit-description-v1.01.pdf.

If you have another problem, please describe the symptoms.

Thanks and 73,
Lou

102. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-11-25 04:55:18 UTC
From: Bob Bennett
Topic: 86 Message: 102

Lou,
My problem has been that the meter is not picking up the signal to the antenna. There is a signal to the antenna, as I have been operating with the HF-1 in line since I built the meter. I have checked for any solder bridges and found none.

1. I have checked for any solder bridges and found none.
2. I checked the RCA cables and even swapped them out.
3. I rechecked the circuit diagram to see if there is continuity between the RCA jacks and the first resistors beyond the RCA jacks; there is.
4. I removed 6S28 and checked pins 9 and 10. Both are grounded
5. I reset it to the factory defaults and ran the diagnostics. Every things seems to check out, except ...
6. On the COUP test the top line will flash SIG DET IN COUP1. The line below, however, continually shows NO INPUT SIG DET

Bob

On 11/24/15 10:00 AM, meterbuilder@... [meterbuilder] wrote:
>
> Hi Bob.
>
> Last time we corresponded, you had an intermittent problem with the
> power, and with either the LEDS or the panel meter light not lighting.
> As I indicated, it sounded like a power problem. If that is still the
> case, you need to trace the power using fig 4 in
> http://www.meterbuilder.com/mb1/docs/mb1-circuit-description-v1.01.pdf.
>
> If you have another problem, please describe the symptoms.
>
> Thanks and 73,
> Lou
>
>

103. Meter available?

Yahoo group: meterbuilder
Date: 2015-11-25 12:03:53 UTC
From: Dave
Topic: 103 Message: 103

Does anyone have a used meter they would like to sell. I have always admired these devices, but can not afford a new one. Dave Kaiser, AL7HG
5395 N Tumblewood Drive
Crystal River, FL 34428

104. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-11-25 15:01:01 UTC
From: meterbuilder@...
Topic: 86 Message: 104

Bob,
according to our records, you purchased the meter in 2013 so it is no longer under warranty. If you want to return the unit for inspection, we will give you an estimate prior to repair.

73,
Lou

105. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-11-25 16:25:58 UTC
From: Bob
Topic: 86 Message: 105

I meant, send me your address

Bob Bennett
Sent from my iPhone

> On Nov 25, 2015, at 10:01 AM, meterbuilder@... [meterbuilder] <meterbuilder@yahoogroups.com> wrote:
>
> Bob,
> according to our records, you purchased the meter in 2013 so it is no longer under warranty. If you want to return the unit for inspection, we will give you an estimate prior to repair.
>
> 73,
> Lou
>
>

106. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-11-25 19:28:54 UTC
From: meterbuilder@...
Topic: 86 Message: 106

Bob,
the shipping address was sent to your email address.

73,
Lou

107. Re: [meterbuilder] Re: Analog Meter not showing any power, no are the panel meters

Yahoo group: meterbuilder
Date: 2015-11-26 05:48:58 UTC
From: Bob Bennett
Topic: 86 Message: 107

Got it

On 11/25/15 11:25 AM, Bob bobsmacbox@... [meterbuilder] wrote:
> I meant, send me your address
>
>
> Bob Bennett
> Sent from my iPhone
>
> On Nov 25, 2015, at 10:01 AM, meterbuilder@...
> <mailto:meterbuilder@...> [meterbuilder]
> <meterbuilder@yahoogroups.com <mailto:meterbuilder@yahoogroups.com>>
> wrote:
>
>> Bob,
>> according to our records, you purchased the meter in 2013 so it is no
>> longer under warranty. If you want to return the unit for inspection,
>> we will give you an estimate prior to repair.
>>
>> 73,
>> Lou
>>
>

108. Peak forward/delivered power and PEP

Yahoo group: meterbuilder
Date: 2016-02-02 11:33:03 UTC
From: wx2s@...
Topic: 108 Message: 108

Hi, meter mavens,

What's the relationship of PEP to peak forward or peak delivered power?

73, -WX2S.

109. Re: Peak forward/delivered power and PEP

Yahoo group: meterbuilder
Date: 2016-02-03 23:36:17 UTC
From: bobsmacbox@...
Topic: 108 Message: 109

Peak forward is what your radio puts INTO the antenna system. The peak delivered is the actual power that gets OUT the antenna. This will be less than the peak forward because of the losses due to being slightly off resonance, line losses and other output power lost and not getting out of the antenna.

110. Re: Peak forward/delivered power and PEP

Yahoo group: meterbuilder
Date: 2016-02-04 00:28:49 UTC
From: wx2s@...
Topic: 108 Message: 110

So is PEP the same as peak forward?

- WX2S

111. Re: Peak forward/delivered power and PEP

Yahoo group: meterbuilder
Date: 2016-02-04 03:51:51 UTC
From: bobsmacbox@...
Topic: 108 Message: 111

Definition of PEP: Peak Envelope Power (PEP) is the average power supplied to the antenna by a transmitter during one radio-frequency cycle at the crest of the modulation envelope taken under normal operating conditions.

I found this on eham.net. I just copied part, but you can Google Peter and find the full article.

Now it should be clear as mud.

73
nz2z/bob

Watts New? The Power Struggle, and Living with PEP.

Steve Katz, WB2WIK/6

I see a lot of postings, and hear comments on the air, too, about power output and “talking the rig up” to its rated power. Maybe a short article is worth a write.

Old Days vs. New Days

In days of old when men were men, rigs were most all rated for transmitter input power, not any particular output power. There was one technical reason for this, and many marketing reasons. The technical reason was that here in the States (and perhaps in other countries, too), our regulations stipulated only a maximum DC input power to the final amplifier stage as our legal power limit. Reason for that was that few hams owned Wattmeters, or any good ones that could be trusted, but most anyone could measure DC Input Power, since that's just a calculation of final amplifier voltage times current.

The Part 97 Legal power limit for licensees above the Novice level was 1000 Watts DC input power. If your final amplifier was 50% efficient, as most probably were, that would yield about 500 W output power. However, there was no distinction between modes: We could run 1 kW DC input on CW (probably 500W output), or on AM, which, with 100% modulation, would yield about 4000 Watts PEP input power, and maybe 2000W PEP output power (!). Then, SSB came about to muddy up the works. SSB had no carrier power to measure, so if you keyed your transmitter and didn't speak, you might be running a few hundred Watts DC Input power (the idling power drawn by the PA to remain linear) and absolutely no output at all!

So, it was deemed by the Powers That Be that a fair amount of SSB power should be 2000 Watts PEP, but still “measured” by DC input power. That's a tall order, and almost nobody could do this. But it was an interesting solution, and everyone who made a “1 kW DC Input Power” amplifier or transmitter now automatically rated it for “2000 Watts PEP input power,” without any way to actually measure that.

Since linear amplifiers are typically about 50% efficient, or most were in those days, hams pretty much figured if we measured PEP output power using an oscilloscope and a dummy load, we should shoot for 1kW PEP output, and we'd probably be right in there, using the maximum power allowed by law. By estimation!

If you own a transmitter or amplifier from the mid-1970's or earlier, it will be rated for DC Input Power, and not actual RF output power, because that's the way it was, at least until 1978.

The “marketing” advantage of this rating method is that manufacturers could claim almost anything. A pair of 6KD6 TV sweep tubes, normally used in pulse service at about 30W or so in a TV set, could now magically run “300 Watts PEP” (input power) in SSB service. Or, almost anything anyone wanted to claim, since measuring PEP input power is something that almost nobody could possibly do.

That led to all sorts of crazy claims in rigs of the late 1960's and early 1970's, as the Japanese manufacturers were just beginning to import rigs to the U.S. to compete with the well-established American rigs, and everyone had to outdo each other. Collins Radio, with their KWM-2 and 32S-series of transceivers and transmitters, did not get caught up in the marketing balogna and continued to rate their transmitters, using dual 6146 power amplifier tubes, at 160W PEP input power, a conservative and very realistic rating. To their credit, Heath Company, with their SB-100, SB-101, SB-400 and SB-401 families, did likewise.

You Can't Hear Input Power

Let's face it, it doesn't matter what your DC input power is, nobody can hear it. It's the Watts that make it to the antenna that count. I think it was in 1978 that the FCC changed the power limit from 1000W DC input power to 1500W PEP output power, and that re-defined what we're really doing. It took a while for hams to conjure that 1500W PEP (output) is also 1500W carrier output power when working CW, RTTY and FM. But 1500W PEP output on AM (standard full-carrier, old-fashioned double sideband AM) was only 375W carrier power for a 100% modulated signal. Hmph! This is the only mode where the “higher power level limit” actually decreased the amount of useful power hams could use.

(This discussion pertains to American hams at this point. I realize legal limit power levels, restrictions, license classes and other things vary country to country.)

It's the PEP, Boys

Most hams don't own accurate PEP measuring instruments. Some do. But the ones that don't are the ones who are always trying to “ahhhhh” or “whistle” up their output power. You can tell. Anytime you tune across someone “hellllllooo”ing or “ahhhhhh”ing, or whistling into their microphones, there's a good chance that someone is watching his average-indicating Wattmeter and trying to figure out why his peak output power isn't anything close to what the book said it should be.

Cut it out, guys, it's silly.

Unless you have a true peak reading Wattmeter (a PEP meter), which is designed to display PEP power and requires an external source of power to operate, you can't evaluate how much power you're really running when using SSB. One way to have a pretty good guess is to switch your transmitter to the CW mode, close the key, and transmit. Look at the power indicated. Then, switch to SSB and forget about the Wattmeter reading. Your output power on voice peaks should be just about exactly whatever the “CW” power indicated. The meter won't show this.

An oscilloscope will show it, and was the primary output measuring instrument for years after the SSB mode became popular. If you tune up on CW and your scope shows your forward power to be “ten cm,” or whatever - and then switch to SSB and your voice peaks hit the

same amplitude (10 cm), your SSB peak envelope power and CW carrier power are the same. It's easy to do, easy to watch, easy to learn. But unless you're using a scope, or a real PEP instrument, you can't tell anything about PEP output power.

The cheapest PEP HF meter on the market that I can think of offhand is the Autek WM-1A, at about $150. It's a bargain*, and reasonably good through the HF spectrum. But it does require a DC power source, and you have to add that, yourself. I also have a couple of Bird model 43P meters, which are the standard 43 “Thruline,” with a peak reading circuit added. That circuit is powered by two 9V batteries, or an external power supply, and adds about $100 in cost to the model 43 - so by the time you have the meter, the PEP adapter, and one plug-in detector element, you're up there in the range of $500 to make your first measurement. Still, not a bad investment.

The little desktop meters that have an AVG/PEAK switch, and do not use a power supply to power them, have no useful peak reading functionality.

But isn't it average power that the guy on the other end hears? Umm, no, not really. SSB is a peak mode, for both transmission and reception. Here's a CW analogy:

If you tune in a CW station transmitting at 20 words per minute, and he's 599, that's good, right? Now, that same station can space his sending differently, so he pauses several seconds between every single element sent. His average power, averaged over a time period (let's say one minute) is now about 10% of what it was before, but his peak power is the same. Is he weaker now, or still 599?

In the example given above, if you measured average vs. peak power, the difference would be amazing. A very accurate way to measure average power is by dissipating it in a load and measuring thermal rise in that load, as all Thermistor or Bolometer type power measuring instruments do. In fact, it's the most accurate method of all, because this technique is not related to waveform or distortion - the load dissipates all power applied, regardless of waveform, and generates heat, which is measured by the instrument. Precisely.

In our example above, the average power of a 1500W output transmitter might be 150W, because the transmitter duty cycle was only 10%. If we return to the normal method of sending code, the duty cycle would be about 50% (average power 750W). That's a five-to-one difference in average power, and the Thermistor-mount, lab-grade, 100% accurate power meter would indicate that astounding difference. But the received signal at the other end of the path would remain exactly the same. If you're S9 with a 50% duty cycle, you'll still be S9 with a 10% duty cycle. Thus, signal reception is not predicated on average power, but rather on peak power.

Keep It Clean

So, PEP is really all that counts for working SSB.

But not entirely! The other thing that counts is signal fullness and fidelity, often described as “punch” and modulation clarity or crispness. Best clarity is rarely achieved with “high fidelity” modulation. It is most always accomplished with modulation quality that is equivalent to how your voice really sounds if it were unaltered by the electronic circuitry of your transmitter and the other station's receiver.

“Punch,” or fullness, is something reasonably easy to achieve in modern SSB transmitters having Automatic Level Control circuits, which they all do. ALC is a control loop, with usually one or more adjustable elements and other preset ones, that allows one to maximize

transmitter output power without creating signal distortion, and if you use your ALC within its design limits, you can have all the punch and fullness of a broadcast station, without the undesired side effects of booming bass or piercing treble.

Transmitters and transceivers vary by design, but I've always found the best way to adjust ALC is to follow the manufacturer's recommendations, and then listen to myself with a separate receiver (using tight-fitting headphones to prevent acoustic feedback) and adjust for the sound I like best. The controls that most closely guide how the ALC loop responds, and how you sound on the air, are your mike gain and speech processing controls. Those usually interact to some degree. Another component that guides the way you sound on the air is your microphone, and of course anything you do externally to your transmitter to alter it. Monitoring, and headphones, help a lot. And believe what people tell you when they provide on-the-air reports. If you get a few complaints of crappy audio, believe them.

If you're one of the Newbies (or even a not-so-Newbie) who likes to watch your Wattmeter as you operate SSB, stop that. Lousy habit, and for the tenth time, the meter reading doesn't mean anything unless you have a real, honest PEP meter. “Talking up” your transmitter to increase the power indicated on the meter results in lousy sounding audio that will not help you get through any better.

112. Re: Peak forward/delivered power and PEP

Yahoo group: meterbuilder
Date: 2016-02-04 04:08:20 UTC
From: wx2s@...
Topic: 108 Message: 112

Can the MB-1 can measure PEP, and if so how?

73, -S.

113. Re: Peak forward/delivered power and PEP

Yahoo group: meterbuilder
Date: 2016-02-04 05:15:36 UTC
From: bobsmacbox@...
Topic: 108 Message: 113

Average, Peak, Reflected and Delivered Power and SWR. The Meter does have the ablilty to add Couplers, by for PEP there is a bit more/different computations involved.

I do enjoy mine. I have some resonant antennas and some the need trimming and a couple of G5RV's. I find it useful to know how much work my rigs' internal tuners are are doing trying to tune the antennas. I also find it useful to know how much power is actually going out over the air, as opposed to being consumed by the resistance of my antenna system.

nz2z

114. Re: Peak forward/delivered power and PEP

Yahoo group: meterbuilder
Date: 2016-02-04 16:45:53 UTC
From: meterbuilder@...
Topic: 108 Message: 114

Hi Steve.

From the definition you posted:

Definition of PEP: Peak Envelope Power (PEP) is the average power supplied to the antenna by a transmitter during one radio-frequency cycle at the crest of the modulation envelope taken under normal operating conditions.

The MB-1 computes the above number up to 500 times per second. Peak power as displayed by the MB-1 is the largest sample obtained during the peak hold interval as set up by the user.

The following is from the MB-1 faq page:

Q: How Does the Peak Hold Algorithm work? Each time a measurement is processed, the software checks the value of the current peak power, and if it is higher, the peak power is updated to the new value. The peak hold timer is then reset. Assuming that the no power measurements exceed that last peak power measurement for the peak hold interval, the peak hold timer will time out, and the new peak power value will be set to the current power level, regardless of its value. For SSB, for instance, if the peak hold is set to 1 second, and you stop transmitting, the peak power will drop to 0 within 1 second or less, depending upon when the last voice peak occurred with respect to the end of transmission.
73,
Lou

115. Meter build going well

Yahoo group: meterbuilder
Date: 2016-03-15 06:24:28 UTC
From: verstelle@...
Topic: 115 Message: 115

Well I finished the build and so far tests have gone well, I still need to connect it to a computer and make sure they will talk to each other. I also need to connect it to a radio and test the coupler and ports. The only problem I had was one IC socket had a pin folded under it instead of through the hole, had remove it and install another one. This is a great kit and even better meter.

I plan on building a coupler for VHF/UHF and will use ad8307's instead of diodes, these ic' are linear up to 500 MHz but max voltage out is 2.7volts so might have to use a opamp to scale it up. Anyway have several ideas for this versatile meter.
Bill N7OQ

116. New builder

Yahoo group: meterbuilder
Date: 2016-03-12 06:42:41 UTC
From: verstelle@...
Topic: 116 Message: 116

Hello group my name is Bill N7OQ, I'm new to the group and just received my mb1 kit this week and have started the build. Really looking forward to finishing it and getting it up and running. Will post up dates,
73, Bill N7OQ

117. Re: [meterbuilder] Meter build going well

Yahoo group: meterbuilder
Date: 2016-03-22 13:40:34 UTC
From: Charles Scott
Topic: 115 Message: 117

Bill:

Sorry it took a bit to approve your first messages to the discussion group. I'm traveling this week and for some reason my wife wants some of my time. All initial messages to the group are moderated to avoid SPAM. You have now been set to un-moderated status so your messages should just go through. Welcome to the group.

I'm curious about your use of the AD8037 for the coupler. Can you provide any info on this application. As to the 2.7 V, I don't think that's a problem. There are input adjustments you can use to adjust for the range you want. I do think it's interesting though that they state the AD8037 is "linear" to 1 dB up to 500 MHz when it's a logarithmic device. :)

Glad you're kit came together with only a minor glitch. I also found that the kit was well documented and came together as planned. I do need to spend more time with mine as I've been ignoring it for a while. Seems it just does it's job, but I've swapped some things around in the shack recently and need to look at how I have it setup again.

Chuck - N8DNX

On 3/15/2016 2:24 AM, verstelle@... [meterbuilder] wrote:
>
> Well I finished the build and so far tests have gone well, I still
> need to connect it to a computer and make sure they will talk to each
> other. I also need to connect it to a radio and test the coupler and
> ports. The only problem I had was one IC socket had a pin folded under
> it instead of through the hole, had remove it and install another one.
> This is a great kit and even better meter.
>
> I plan on building a coupler for VHF/UHF and will use ad8307's instead
> of diodes, these ic' are linear up to 500 MHz but max voltage out is
> 2.7volts so might have to use a opamp to scale it up. Anyway have
> several ideas for this versatile meter.
>
> Bill N7OQ
>
>

118. Re: Meter build going well

Yahoo group: meterbuilder
Date: 2016-03-22 17:07:05 UTC
From: meterbuilder@...
Topic: 115 Message: 118

Hi Bill.

Glad the build went well.

With regard to needing the op amp, take a look at table 1 at the bottom of

http://www.meterbuilder.com/mb1/bird-line-sections.html
http://www.meterbuilder.com/mb1/bird-line-sections.html

With the MB-HF1 coupler the MB1 can reliably read .05 watts, which corresponds to a voltage of .126 volts.
So if the AD8307 generates approx .1 volts or more for the region of interest, you should be OK.

73,
Lou

119. Re: [meterbuilder] Meter build going well

Yahoo group: meterbuilder
Date: 2016-03-26 23:25:27 UTC
From: Bill Verstelle
Topic: 115 Message: 119

Ok Chuck thanks for putting me on un-moderated status and I understand about the spam it is so hard to keep up with it. I really like the ad8307's I bought a dozen of them and have been playing with them. They beat a diode in linearity and don't have the barrier voltage to get over. I do know they do need a good ground, I bought the surface mount ones and some carrier boards and the ground pin was a small trace to the pin. I had a lot of weird readings until I added a ground plane and then everything got good. I wrote a small Arduino program to convert the voltage to watts and Db and was going to make a make a case for it but now I have all I need so will use the mb1 instead.

BTW I just got back from RVing on the coast and had no wifi, now that is roughing it.

Lou you are correct in fact I might need a attenuator to get it where I want it. I don't need to read nano watts. Now that I'm home I will get back to playing with it, I have a ad8307 already mounted with a BNC and the output ready to connect to the mb1 so when I get it connected and calibrated I let everyone know how it works. I also have a directional coupler that I plan on adding 2 Ad8307, will make a pcb for that and get it calibrated too.
73,
Bill N7OQ

Sent from my iPad

> On Mar 22, 2016, at 6:40 AM, Charles Scott cscott@... [meterbuilder] <meterbuilder@yahoogroups.com> wrote:
>
> Bill:
>
> Sorry it took a bit to approve your first messages to the discussion group. I'm traveling this week and for some reason my wife wants some of my time. All initial messages to the group are moderated to avoid SPAM. You have now been set to un-moderated status so your messages should just go through. Welcome to the group.
>
> I'm curious about your use of the AD8037 for the coupler. Can you provide any info on this application. As to the 2.7 V, I don't think that's a problem. There are input adjustments you can use to adjust for the range you want. I do think it's interesting though that they state the AD8037 is "linear" to 1 dB up to 500 MHz when it's a logarithmic device. :)
>
> Glad you're kit came together with only a minor glitch. I also found that the kit was well documented and came together as planned. I do need to spend more time with mine as I've been ignoring it for a while. Seems it just does it's job, but I've swapped some things around in the shack recently and need to look at how I have it setup again.
>
> Chuck - N8DNX
>
>
>> On 3/15/2016 2:24 AM, verstelle@... [meterbuilder] wrote:

>>
>> Well I finished the build and so far tests have gone well, I still need to connect it to a computer and make sure they will talk to each other. I also need to connect it to a radio and test the coupler and ports. The only problem I had was one IC socket had a pin folded under it instead of through the hole, had remove it and install another one. This is a great kit and even better meter.
>>
>> I plan on building a coupler for VHF/UHF and will use ad8307's instead of diodes, these ic' are linear up to 500 MHz but max voltage out is 2.7volts so might have to use a opamp to scale it up. Anyway have several ideas for this versatile meter.
>>
>> Bill N7OQ
>>
>
>

120. Calibrating a coupler, rf source.

Yahoo group: meterbuilder
Date: 2016-04-05 21:54:42 UTC
From: verstelle@...
Topic: 120 Message: 120

I have tried to calibrate a coupler I got out of a old swr meter and watched the video that Leu made and I hVe a problem. My rigs both Kenwoods have 5 watt steps and of course they never land right on the mark , kill 20watts might be 22.35watts and it will be out of the range of the calibration pot on the MA1. So I'm only able to get maybe 3 values the make it with in range on a 1000 watt calibration.

So how are you able to dial in such percise wattages? Is your rig have a pot instead a step encoder? I was thinking I might connect the function generator to the radio and inject audio in the microphone and use the audio gain, rf watts control and function generator amplitude control to get a more percise output. Do think this would work or would it not be stable enough?

I got out my ad8703 modul I made and did some tests on it and with no rf connected I get .2 volts out at the noise floor. I can start getting readings at -85 Dbm that are stable all the way up to +17 that is 2.7 volts. So I'm thinking that is to low and maybe I will install a attenuator so that the top end is higher and still be able to measure in the nanowatts. Maybe a 20 db attenuator then I could go to 50 watts and I think 3 nanowatts at the lower end. Of course the attenuator would have to be able to handle 50 watts.
73,
Bill N7OQ

121. Re: Calibrating a coupler, rf source.

Yahoo group: meterbuilder
Date: 2016-04-06 20:27:18 UTC
From: meterbuilder@...
Topic: 120 Message: 121

Hi Bill.

I typically use a Yaesu Mark V, which has a pot and can be dialed to very low power levels.

I also have a 756 Pro also which is not quite as precise as the MK V with the ability to dial in low powers, but is still pretty good. If you can borrow one of these rigs, you can get the jon done.

Also, you could try to plot the Power vs voltage curve for your coupler. You could then interpolate various power levels, and dial them in with a 12 v connected to a 10 turn pot (dialing in the corresponding DC voltage for each calibration point).

A little bit of a kludge, but this might work. You might try to install a manual antenna tuner at the output of the rig, and severely detune it so that the the power at the output of the tuner is very low compared to the input. (You can use the tuner to dial in the desired calibration power as seen by the reference meter). You are not driving with 50 ohms, but the reference meter should be seeing roughly the same impedance as the MB1 coupler.

73,
Lou

122. Re: [meterbuilder] Re: Calibrating a coupler, rf source.

Yahoo group: meterbuilder
Date: 2016-04-06 22:31:30 UTC
From: Bill Verstelle
Topic: 120 Message: 122

OK Lou, what I got out of that is I need a new radio,☐ I'll let the XYL know haha. All kidding aside that is some great ideas. I will graph it across its range and I'm sure I will get it as close as I will ever need. I'm thinking I will make a PCB for 2 ad8307's and replace the diodes with that before I do any graphing and calibrating.
Thanks and 73
Bill N7OQ

Sent from my iPad

> On Apr 6, 2016, at 1:27 PM, meterbuilder@... [meterbuilder]
<meterbuilder@yahoogroups.com> wrote:
>
> Hi Bill.
>
>
> I typically use a Yaesu Mark V, which has a pot and can be dialed to very low power levels.
>
> I also have a 756 Pro also which is not quite as precise as the MK V with the ability to dial in low powers, but is still pretty good. If you can borrow one of these rigs, you can get the jon done.
>
> Also, you could try to plot the Power vs voltage curve for your coupler. You could then interpolate various power levels, and dial them in with a 12 v connected to a 10 turn pot (dialing in the corresponding DC voltage for each calibration point).
>
> A little bit of a kludge, but this might work. You might try to install a manual antenna tuner at the output of the rig, and severely detune it so that the the power at the output of the tuner is very low compared to the input. (You can use the tuner to dial in the desired calibration power as seen by the reference meter). You are not driving with 50 ohms, but the reference meter should be seeing roughly the same impedance as the MB1 coupler.
>
>
>
> 73,
> Lou
>

123. Display Issue - Solved

Yahoo group: meterbuilder
Date: 2016-07-26 12:10:38 UTC
From: Charles Scott
Topic: 123 Message: 123

All:

I had an issue come up with my MB-1 this month that I thought I'd mention.

The LCD display stopped displaying anything, although it was still lit. It looked like the unit was working otherwise though. I found that one of the two tiny switches on the LCD daughter board needed to be reseated by moving it right a bit then back to the correct position. That fixed the problem.

The interesting thing is that it has been working for some time without issues and hadn't hardly been moved. Happy to have it working again and very glad it wasn't anything serious.

Chuck - N8DNX

124. Problem in MB-1 coupler?

Yahoo group: meterbuilder
Date: 2017-01-06 13:03:04 UTC
From: wx2s@...
Topic: 124 Message: 124

Hi, all,

At high power, the SWR is starting to creep up under continuous load. I have two other meters in series with the coupler, and neither of them is seeing this. How can I check for a defective coupler?

Thanks and 73,
Steve WX2S.

125. Re: Problem in MB-1 coupler?

Yahoo group: meterbuilder
Date: 2017-01-06 16:46:54 UTC
From: meterbuilder@...
Topic: 124 Message: 125

Hi Steve.

I responded to you via email.

73,
Lou K2FP

126. Coupler for VHF

Yahoo group: meterbuilder
Date: 2017-03-20 21:16:45 UTC
From: ka7gzr@...
Topic: 126 Message: 126

Hi Lou
I would like to add a coupler for my VHF transmitter to my MB1. Are there any recommendations?
Thanks,
Jim
ka7gzr

127. Re: Coupler for VHF

Yahoo group: meterbuilder
Date: 2017-03-21 13:26:46 UTC
From: meterbuilder@...
Topic: 126 Message: 127

Hi Jim.

Any vhf coupler that produces a reasonable output (a couple of volts, full scale, should work.

Both PowerMaster and WaveNode are two vendors that sell VHF couplers for their own meters. These will work with the MB1.

But if you have an old VHF power meter that you don't mind experimenting with, you should give it a try by using its coupler.

73,
Lou

128. Re: Coupler for VHF

Yahoo group: meterbuilder
Date: 2017-03-22 08:05:30 UTC
From: ka7gzr@...
Topic: 126 Message: 128

Thanks Lou. That's what I like about the MB1- it's so flexible.
I will check out the references.
Jim
ka7gzr

129. Re: Coupler for VHF

Yahoo group: meterbuilder
Date: 2017-03-23 14:17:41 UTC
From: meterbuilder@...
Topic: 126 Message: 129

Thanks Jim.

73,
Lou

130. multiple coupler display

Yahoo group: meterbuilder
Date: 2017-08-29 10:08:17 UTC
From: scanfield58@...
Topic: 130 Message: 130

Has any update ever encompassed using 2 couplers simultaneously? I saw this mentioned in the review of the meter and have been hoping that the update would be released. It would be great to be able to monitor amplifier input power and SWR and output power and SWR at the same time.

131. can't find the download link

Yahoo group: meterbuilder
Date: 2017-08-29 10:25:25 UTC
From: scanfield58@...
Topic: 131 Message: 131

Can't find the download link... "A beta version of the Multi-Coupler Mode feature can be installed by downloading V2.00 of the firmware. See Downloads http://meterbuilder.com/mb1/downloads.html page."
Is my fading brain and eyesight missing something obvious?
thanks!
Steve K7SWC

132. Re: multiple coupler display

Yahoo group: meterbuilder
Date: 2017-08-30 02:51:10 UTC
From: Jerry
Topic: 130 Message: 132

Its there on the page but says:

Beta version for Multi-Coupler Display Feature (currently not available)

73

Jerry, NY2KW

133. Re: [meterbuilder] Re: multiple coupler display

Yahoo group: meterbuilder
Date: 2017-08-30 20:40:26 UTC
From: Bob
Topic: 130 Message: 133

Jerry,
Saw it but it was not linkable

Bob

> On Aug 29, 2017, at 10:51 PM, 'Jerry' jsternmd@... [meterbuilder]
<meterbuilder@yahoogroups.com> wrote:
>
> Its there on the page but says:
>
>
>
> Beta version for Multi-Coupler Display Feature (currently not available)
>
>
>
>
>
> 73
>
> Jerry, NY2KW
>
>
>
>

134. Re: [meterbuilder] can't find the download link

Yahoo group: meterbuilder
Date: 2017-09-01 21:35:06 UTC
From: Bob Bennett
Topic: 131 Message: 134

Still can’t find the v 2.0 firmware. I get this:

MB-1 Firmware Updates:

Version 1.00 (version shipped with meter)
<http://meterbuilder.com/mb1/tools/MB-1-firmware-V1.00.zip>
Beta version for Multi-Coupler Display Feature (currently not available)

With the Beta version not linked.

Bob nz2z

> On Aug 29, 2017, at 6:25 AM, scanfield58@... [meterbuilder]
<meterbuilder@yahoogroups.com> wrote:
>
>
> Can't find the download link... "A beta version of the Multi-Coupler Mode feature can be
installed by downloading V2.00 of the firmware. See Downloads
<http://meterbuilder.com/mb1/downloads.html> page."
>
> Is my fading brain and eyesight missing something obvious?
>
> thanks!
>
> Steve K7SWC
>
>
>
>

135. Re: [meterbuilder] can't find the download link

Yahoo group: meterbuilder
Date: 2017-09-01 21:55:25 UTC
From: ab4d@...
Topic: 131 Message: 135

Have you tried sending an email to Lou (support@...)?

-----Original Message-----
From: Bob Bennett bobsmacbox@... [meterbuilder] <meterbuilder@yahoogroups.com>
To: meterbuilder <meterbuilder@yahoogroups.com>
Sent: Fri, Sep 1, 2017 5:35 pm
Subject: Re: [meterbuilder] can't find the download link

Still can’t find the v 2.0 firmware. I get this:

MB-1 Firmware Updates:

Version 1.00 (version shipped with meter)

Beta version for Multi-Coupler Display Feature (currently not available)

With the Beta version not linked.

Bob nz2z

On Aug 29, 2017, at 6:25 AM, scanfield58@... [meterbuilder] <meterbuilder@yahoogroups.com> wrote:

Can't find the download link... "A beta version of the Multi-Coupler Mode feature can be installed by downloading V2.00 of the firmware. See Downloads page."
Is my fading brain and eyesight missing something obvious?
thanks!
Steve K7SWC

136. Re: [meterbuilder] can't find the download link

Yahoo group: meterbuilder
Date: 2017-09-03 10:27:05 UTC
From: Steven Canfield
Topic: 131 Message: 136

I did send an email to Lou a month or so ago asking a couple of questions but never saw a response. Was hoping that one of the members of the group might have a copy of the v2.0

On 09/01/2017 02:55 PM, ab4d@... [meterbuilder] wrote:
>
> Have you tried sending an email to Lou (support@...
> <mailto:support@...>)?
>
>
> -----Original Message-----
> From: Bob Bennett bobsmacbox@... [meterbuilder]
> <meterbuilder@yahoogroups.com>
> To: meterbuilder <meterbuilder@yahoogroups.com>
> Sent: Fri, Sep 1, 2017 5:35 pm
> Subject: Re: [meterbuilder] can't find the download link
>
> Still can’t find the v 2.0 firmware. I get this:
>
>
> *
> MB-1 Firmware Updates: *
>
>
> Version 1.00 (version shipped with meter)
> <http://meterbuilder.com/mb1/tools/MB-1-firmware-V1.00.zip>
>
>
> Beta version for Multi-Coupler Display Feature (currently not
> available)
>
> With the Beta version not linked.
>
> Bob nz2z
>
>
>
> On Aug 29, 2017, at 6:25 AM, scanfield58@...
> <mailto:scanfield58@...> [meterbuilder]
> <meterbuilder@yahoogroups.com
> <mailto:meterbuilder@yahoogroups.com>> wrote:
>
>
> Can't find the download link... "A beta version of the
> Multi-Coupler Mode feature can be installed by downloading V2.00

> of the firmware. See Downloads
> <http://meterbuilder.com/mb1/downloads.html> page."
> Is my fading brain and eyesight missing something obvious?
> thanks!
> Steve K7SWC
>
>
>
>

137. Re: [meterbuilder] can't find the download link

Yahoo group: meterbuilder
Date: 2017-09-04 16:52:09 UTC
From: Bob
Topic: 131 Message: 137

I heard from him and he said that there is only one version of the firmware, the one that is on it.

Bob Bennett
from my iPhone

> On Sep 3, 2017, at 6:27 AM, Steven Canfield scanfield58@... [meterbuilder] <meterbuilder@yahoogroups.com> wrote:
>
> I did send an email to Lou a month or so ago asking a couple of questions but never saw a response. Was hoping that one of the members of the group might have a copy of the v2.0
>
>> On 09/01/2017 02:55 PM, ab4d@... [meterbuilder] wrote:
>>
>> Have you tried sending an email to Lou (support@...)?
>>
>>
>>
>> -----Original Message-----
>> From: Bob Bennett bobsmacbox@... [meterbuilder] <meterbuilder@yahoogroups.com>
>> To: meterbuilder <meterbuilder@yahoogroups.com>
>> Sent: Fri, Sep 1, 2017 5:35 pm
>> Subject: Re: [meterbuilder] can't find the download link
>>
>>
>> Still can’t find the v 2.0 firmware. I get this:
>>
>>
>> MB-1 Firmware Updates:
>>
>> Version 1.00 (version shipped with meter)
>>
>> Beta version for Multi-Coupler Display Feature (currently not available)
>>
>>
>> With the Beta version not linked.
>>
>> Bob nz2z
>>
>>
>>
>> On Aug 29, 2017, at 6:25 AM, scanfield58@... [meterbuilder] <meterbuilder@yahoogroups.com> wrote:
>>
>>

>> Can't find the download link... "A beta version of the Multi-Coupler Mode feature can be installed by downloading V2.00 of the firmware. See Downloads page."
>> Is my fading brain and eyesight missing something obvious?
>> thanks!
>> Steve K7SWC
>>
>>
>>
>
>

138. Re: can't find the download link

Yahoo group: meterbuilder
Date: 2017-09-05 03:26:37 UTC
From: Jerry
Topic: 131 Message: 138

This is the email response I just got from Lou:

"Hi Jerry.

I could not get the performance required with the current version of the compiler, so I pulled the beta. I have hopes that the compiler will support a higher level of optimization but they have not delivered thus far.

Lou"

I am not sure what the compiler optimization issue might be but that seems to be why there is no beta available

73

Jerry, NY2KW

139. Re: [meterbuilder] can't find the download link

Yahoo group: meterbuilder
Date: 2017-09-15 14:57:42 UTC
From: meterbuilder@...
Topic: 131 Message: 139

Sorry for the delayed response. As another user posted, there was a performance problem with the v2 so I removed it. The optimization level of the compiler required to support this has bugs and breaks some of the basic features. If that gets resolved, I'll give it another try.

My apologies for any confusion on this caused.

73,
Lou

140. Re: [meterbuilder] can't find the download link

Yahoo group: meterbuilder
Date: 2017-09-15 16:16:03 UTC
From: Charles Scott
Topic: 131 Message: 140

Lou:

I've been running that version. Is the performance issue likely to cause
any noticeable effects that I might need to back out of it for now?

Are you considering a processor upgrade?

Chuck

On 9/15/2017 10:57 AM, meterbuilder@... [meterbuilder] wrote:
>
> Sorry for the delayed response. As another user posted, there was a
> performance problem with the v2 so I removed it. The optimization
> level of the compiler required to support this has bugs and breaks
> some of the basic features. If that gets resolved, I'll give it
> another try.
>
>
> My apologies for any confusion on this caused.
>
> 73,
> Lou

141. Re: [meterbuilder] can't find the download link

Yahoo group: meterbuilder
Date: 2017-09-15 19:49:18 UTC
From: meterbuilder@...
Topic: 131 Message: 141

Chuck, at the optimization level used for multiple couplers, the compiler mangles some routine addresses. It shows up in the analog meter customization routines.

Lou

142. Re: [meterbuilder] can't find the download link

Yahoo group: meterbuilder
Date: 2017-09-15 17:45:02 UTC
From: ab4d
Topic: 131 Message: 142

Lou, thanks for the response.

Sent from my Huawei Mobile

-------- Original Message --------
Subject: Re: [meterbuilder] can't find the download link
From: "meterbuilder@att.net [meterbuilder]"
To: meterbuilder@yahoogroups.com
CC:

Sorry for the delayed response. As another user posted, there was a performance problem with the v2 so I removed it. The optimization level of the compiler required to support this has bugs and breaks some of the basic features. If that gets resolved, I'll give it another try.

My apologies for any confusion on this caused.

73,
Lou

144. Re: Remote Access of the LP-700 VM

Yahoo group: meterbuilder
Date: 2017-09-18 15:52:14 UTC
From: meterbuilder@...
Topic: 143 Message: 144

Hi Jim.

Wrong group.

73,
Lou

145. Re: Remote Access of the LP-700 VM

Yahoo group: meterbuilder
Date: 2017-09-18 17:11:00 UTC
From: ka7gzr@...
Topic: 143 Message: 145

Sorry Lou!

146. Re: Problem in MB-1 coupler?

Yahoo group: meterbuilder
Date: 2017-11-09 03:35:46 UTC
From: wx2s@...
Topic: 124 Message: 146

The problem turned out not to be the coupler -- but now I've got another problem. All inputs started reading too low. Looking at the circuit, it's most likely U10 or the processor module. Tried reseating both, no effect.

- Steve WX2S.

147. Re: Problem in MB-1 coupler?

Yahoo group: meterbuilder
Date: 2017-11-09 15:08:53 UTC
From: meterbuilder@...
Topic: 124 Message: 147

Hi Steve.

Just sent you an email suggesting a test.

Lou